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MEDICAL ASPECTS OF SURGICAL DISEASES, OR PREVENTIVE SURGERY*

JOSEPH COLT BLOODGOOD, M.D.

BALTIMORE

Most surgeons must feel daily that they are called on to employ their art as operating technicians at the wrong and late period of the disease. In this sense much of their work is unnecessary surgery. Earlier recognition of the disease, in some cases followed by appropriate treatment, may make surgical intervention unnecessary; such measures belong to preventive surgery.

Most physicians must regret their relation to the late intervention of surgery. In the literature and in conversation one so often reads and hears that surgery should be the last resort, modified sometimes by the statement: but not a late resort. This expression "a last, but not a late resort," sounds well, and I am quite certain that those who employ it mean well and are just as anxious to have surgery an early intervention, although as a "last resort." I fear, however, that the promulgation of the expression that surgery should be a last resort will unconsciously act to make it a late resort.

In view of the daily painful reminders in my operative work that surgery, indeed, is a late and last resort, and much of it unnecessary in this late period and some of it absolutely preventable, it is natural that I should wish to discuss the surgeon's view of the medical aspects of surgical diseases. In the last few years I have been especially attracted by this phase of the subject and have dwelt on it at considerable length in teaching.

The facts are these: At the present time and ever since modern surgical methods were introduced, surgical technic has been far ahead of either surgical or medical diagnosis. No one can question this. A graduate in medicine can become proficient in surgical technic long before he is in diagnosis. Surgeons, therefore, are prepared, in the majority of cases, to offer this improved technic to patients with surgical lesions in the early stage of the disease as well as in later periods. A statistical study of any surgical clinic will demonstrate that all classes of diseases which ultimately come for treatment by operation come, not in the early stage, but at later periods.

Studies of immediate and late results demonstrate that the operative mortality is greater in the late period, the postoperative complications and period of disability greater than when the operation is performed in the early stage. But the contrast is most striking in the study of the late results. This is especially true for malignant tumors.

In June, 1910, in an address before the State Medical Society of Wisconsin, I took for my subject the Medical and Surgical Aspects of Tumors.[1] For this reason I shall dwell but shortly on this subject and chiefly bring out further evidence which has accumulated since that time.

All surgeons will admit that an operation in the earlier period of the disease (when the patient is suffering not at all, or very little, when there is no pitiful cry for relief) is an unpleasant resort. Toward operative intervention there is still in the minds of the majority a mental attitude of fear.

There is always hope that an operation will not be necessary. Hope, fear, unpleasant resort are factors which act against early surgical intervention. But, there are others—ignorance, of the laity and the profession. In addition, the diagnosis of the surgical disease in the period most favorable for the prevention of an operation, or for the best immediate and permanent results of an early operation, is most difficult.

Again and again the statement has been made: The more difficult the diagnosis, the better the prognosis for surgical intervention, and the reverse.

I am inclined to believe that perhaps the general public, especially the younger generation, is being educated more rapidly than the general profession in regard to modern advanced methods of diagnosis which allow the recognition of surgical diseases in this earlier and more favorable period.

But we cannot hope for any better results after surgical intervention unless the methods of diagnosis already employed by the minority are made familiar to, and made use of by, the entire profession. There is a crying need for diagnosticians.

The public seeks first the advice of the general practitioner. He must be a better diagnostician. He must have available for his use the more modern methods helpful for this diagnosis.

Those fortunate enough to be connected with a large hospital have, within easy access, all of these methods—a trained laboratory man to make the Wassermann test, the Widal reactions, and bacteriologic examinations; trained clinical assistants for the examination of urine, sputa and stomach contents, blood-pressure and kidney function; a roentgenologist to make *x*-ray plates and investigations with the fluoroscope; laboratories equipped to make frozen sections for microscopic examination of doubtful cases; colleagues specializing in different branches who are able and willing to aid one another in the differential diagnosis. In such a hospital there is an expert to make an ophthalmoscopic investigation and to employ with precision such instruments as the laryn-

* Read before the Lehigh Valley Medical Association, Delaware Water Gap, Pa., July 20, 1911.

1. Bloodgood, J. C.: Wisconsin Med. Jour., August, 1910, ix, No. 3.

goscope, esophagoscope, bronchoscope, cystoscope, catheter, etc.

In large cities physicians are able to give their patients the benefit of these methods of diagnosis, but in smaller cities and in the country nothing of this kind is accessible, except for a few places. Some states have established laboratories in connection with the boards of health for making such examinations. In view of the danger of infectious diseases most city governments provide laboratories and experts to make for the general practitioner certain laboratory examinations free of charge, for example, blood-examinations for typhoid and malaria, bacteriologic investigations from cultures and smears from the throat, etc. Now, if the people are willing to pay for this, which is for their benefit, why should they not go further? It is quite impossible for any single practitioner to provide for all of the examinations. It is too expensive either for himself or for his patient.

Now, if we make the statement that surgery should be an earlier intervention and that this can be accomplished only by better methods of diagnosis, we must provide, in some way, for this. It appeals to me that the enlargement of the city health departments to meet such demands and the establishment of laboratories and laboratory experts in districts would meet the need with the least expense to the public.

The fact that surgery is usually the last and a late resort is not by any means always due to the inability of the physician to get these more accurate methods of diagnosis, but to faulty clinical knowledge of ordinary clinical methods.

I wish to emphasize this, because here is an opportunity for a great improvement with, perhaps, the least expense. A better knowledge of the surgical disease can be obtained by reading, and this, combined with a little more careful examination by inspection, by palpation and by taking a more careful clinical history, will allow the physician to reach a pretty accurate conclusion without the aid of the other methods.

But I wish to urge on the practitioner to break away from the older text-book pictures so typical of the various diseases in their late and often hopeless stage, and to attempt, by reading more modern text-books and especially current literature, to get the earlier picture.

Important as these more expert methods of diagnosis are, they are not essential in the large majority of cases to the general practitioner for the recognition of most surgical diseases in their more favorable stage for treatment.

If every individual were required by the state to subject himself or herself to medical examination at certain intervals of time, then we should have to use these laboratory methods which are now employed only by those proficient in their use. The public, however, seeks advice for symptoms, and in the large proportion of cases, if the physician is painstaking and observant, he will be able to come to a pretty fair conclusion from what the patient tells him and from what he can find out himself by simple physical diagnosis. If he cannot come to a conclusion, the methods of diagnosis which he is not prepared to use can be employed in the majority of instances by others for him. The question can be stated in so many ways, but I am very anxious to present it in a light that will be helpful, in a manner that will not create antagonism.

With most surgical lesions the average practitioner has experience with but a few, one or more. So it cannot be expected of him to make the early diagnosis without help. Large surgical clinics collect great numbers of the different surgical diseases so they should be able from their records to present most accurately the medical aspects. In this country, however, the surgeon in the past has written more frequently on technic than on diagnosis.

It is my view that if the surgeon really desires to get his surgical cases at an earlier and more favorable period, he should first study his own records and present this investigation to his medical colleagues. I fear the evidence will show that, while the surgeon has been crying to be allowed to operate earlier, he has not furnished the evidence to support his demand and he has not given to the clinicians the facts which are obtainable only from his surgical records.

I shall, in the further discussion, give examples to illustrate these general remarks which have preceded as an introduction.

We all recognize that surgery should be an earlier resort. The question is how to do it. I shall attempt to answer this question, as far as I am able from evidence which I have personally collected, based on recorded facts which I believe are truthful.

GASTRIC ULCER AND CANCER

It is my opinion that the accumulated experience favors the view, chiefly emphasized by the Mayos in this country, by Moynihan and Robson in England, and Hartmann in France, that gastric ulcer is the precancerous lesion in 75 per cent. or more of all cases of gastric cancer. The more I personally see of gastric cancer and restudy the histories of the older cases, the more am I inclined to this view. Whether this has been proved with scientific accuracy is, in my opinion, immaterial to the question before us. I am confident that experience shows that the only way to give the surgeon an opportunity to operate on a cancer of the stomach at a favorable period is for the medical profession and the public to look on symptoms of gastric ulcer as the first stage of gastric cancer, and these symptoms should lead at once to medical or surgical treatment which heals or removes the ulcer.

I have restudied most carefully, with the aid of the fourth-year medical class, all the cases of gastric cancer on record in the surgical pathologic laboratory of the Johns Hopkins Hospital and University. Most of these cases come from the clinics of Drs. Halsted and Finney, or from my own. Here in Baltimore, our records show that surgeons meet, on exploring the stomach, at least four cases of cancer to one of ulcer. The records of clinics in which the best results have been obtained in resection of the stomach for cancer show an opposite condition of affairs. This is true of the clinic at Rochester, Minn., of Kocher's clinic and some few others.

Up to the present time, among my colleagues in Baltimore, I know of not one case of resection of the stomach for cancer in which the patient has lived three years or more after the operation. During the last two years we have had some favorable cases. I had two in which the chances of a cure seem unusually good.

Kocher found that all his patients cured of cancer of the stomach had freely movable tumors at the pylorus, producing obstruction; all but one were of the type of adenocarcinoma, and none associated with metastasis. Naturally cancer at the pylorus brings the patient earlier for operation, because it produces stenosis.

There is great difference of opinion among both surgeons and physicians as to what shall be considered the minimum of symptoms which justify the exploration of the stomach. Surgery here is truly a last and late resort.

Pyloric stenosis, as a rule, forces surgical intervention. Otherwise there is a long period of pain, various gastric discomforts before the patient comes for surgical treatment. During this time, of course, it is good luck, not good management, which prevents the development of cancer, if it does not take place.

Eighty per cent. of all the cases of cancer of the stomach which I have studied clinically give a history of definite gastric symptoms of over one year, many of from five to twenty years, the large percentage of them of two and three years. In all of these there was ample opportunity for earlier intervention. In every case the maximum symptoms were present.

Perhaps the profession and the public do not realize that gastric cancer is a very common disease and ranks among the most frequent of all cancers.

In my opinion, we do not need the aid of instruments of precision or expert laboratory methods to ascertain the minimum symptoms which justify exploration. The most neglected available examination by the general practitioner is the passage of the stomach-tube and the estimation of the amount and gross characteristics of the stomach contents. This objective finding, with a few weeks' observation, during which the patient is under a restricted diet, is sufficient to justify a consultation at a hospital where all the other examinations can be made.

Indigestion is such a common complaint, it is so often associated with alcohol, tobacco, overeating, lack of exercise, worry, overwork, and many different mental conditions, that the average practitioner thinks of these only, but ulcer and, later, cancer may develop from these etiologic factors. Most of my cases of ulcer in young adult males have been associated with alcohol.

The medical relief should be rapid in these cases, and all these patients should be carefully watched. I am confident, from the experience of three years at the St. Agnes Hospital, where my medical colleagues have given me an opportunity to explore the stomachs when minimum symptoms were present, that it is not so difficult a problem. Now, if the medical section of the great profession will answer our call and help us to decide when to operate, the surgical section will promise to educate itself to know what is best to do when the abdomen is opened.

I make this statement with great care, but it has been my personal observation, confirmed by the reading of the literature, that physicians who specialize in gastro-enterology have learned by their special methods of treatment to make their patients so comfortable that they are very apt, when they get an early cancer in ulcer, to carry it along from the operable period to the inoperable one in comparative comfort. I am certain that less harm will be done by the surgeon who, with good technic, may open the abdomen for exploration a little too frequently than by the physician who, through any means, delays operative intervention in ulcer and cancer.

The surgery of gastric ulcer and cancer, especially ulcer, is by no means settled to-day, but in my opinion the technic is far ahead of the diagnosis. There is but one thing to do for operable gastric cancer—resection. The only question is, how shall the stomach be reanastomosed.

In regard to ulcer of the stomach the opinion that resection should be the operation of choice is growing in strength. If the adhesions are not too extensive, this operation should have no higher mortality, its immediate results are better, and, I am confident, time will show that the permanent results are far more satisfactory, because the ulcer, the precancerous lesion, is excised.

In the last year I have performed pylorectomy with a Kocher anastomosis in many cases, in which previously I would have been content with gastro-enterostomy or a Finney pyloroplasty. But these are surgical questions.

I trust that as surgeons restudy and publish their clinical observations on gastric cancer with the confirming statement of the frequency of a long history suggesting ulcer, and that as surgeons demonstrate by their reported experience that their mortality is low and their immediate and permanent results increasingly better, the laity and the general profession will attempt to reduce the total number of gastric cancer so that more operations will take place at the stage of ulcer, or in an earlier stage of cancer.

The physician, of course, must first feel convinced that the technic of his surgical colleague is sufficiently good to justify his advice of operative intervention.

CANCER OF THE COLON

Dr. Cody, a recent graduate of the Johns Hopkins University, first studied with me in a critical way the entire experience with cancer of the colon at my laboratory. I have restudied the subject again with Dr. Hebb of Baltimore. This has brought out most valuable information from which we can develop the medical aspects or the minimum symptoms which will allow one to explore the abdomen and resect this relatively benign cancer of the colon. These cases, up to the present time, can be divided into two main groups: In one, the larger fortunately, the patient comes to operation because of acute intestinal obstruction, and if the obstruction is relieved in time, the cause is ascertained, and the patient lives for the secondary resection. Although there is a fairly and unnecessarily large percentage of immediate mortality in this group, yet, among the survivors there are almost 80 per cent. of permanent cures. The individual, therefore, with a cancer of the colon is fortunate to get obstruction, because this will result in early operation.

In the second, smaller, group there are no acute symptoms of obstruction. The development of the clinical course varies somewhat, but all the patients suffer from attacks of abdominal pain of a sufficient degree to excite much more interest on part of the physician.

Then there may be intermittent diarrhea or constipation with or without blood or ribbon stools. There may be attacks of belching, nausea, vomiting and distention; indigestion of various degrees. These symptoms go on, the attacks repeat themselves, the patients are usually treated for neurasthenia or mucous colitis. No *x*-ray examinations are made. The proctoscope is neglected. The patients usually come for operation because of the appearance of a palpable tumor, or the greater discomfort and distention of the ascites from peritoneal metastasis. In this group, although there has been but little operative mortality from the exploratory laparotomy—a late and last resort—yet, there have been but few cures — less than 5 per cent. — either because the tumor has become adherent and thus inoperable, or because metastasis has taken place. Most of the patients admitted

with acute obstruction give a history of previous symptoms of the same character.

I am confident, from this study, that cancer of the colon can and should be recognized earlier in a larger number of cases without the aid of the accidental acute obstruction. Cancer of the colon is a most favorable type of cancer. Resection of the colon is now a well-established surgical technic with minimum dangers.

If surgeons are given the opportunity to explore the abdomen, because the symptoms suggest cancer of the colon, they must make a very careful *x*-ray study before operation, because recent experience shows that in the early stage there is not much difference in the symptomatology of cancer of the colon in the different situations. Local pain is not often present. The pain is usually general, like colic.

In addition, there are many benign lesions the symptomatology of which is practically identical with the early stage of cancer. These lesions may even produce acute obstruction. So the surgeon must prepare himself to recognize cancer, for which there is but one operation —resection. If this malignant lesion is excluded he must be familiar with the various benign conditions and their operative treatment, because often the more radical resection is not necessary to accomplish a cure. Some of these benign lesions are: ptosis of the colon, which may be of various types; pericolitis with kink formation; mesenteritis; diverticulitis; this latter and volvulus are most frequently situated in the sigmoid colon. Then there are the rare inflammatory tumors which produce indurated masses in the wall of the colon, most frequently observed in the region of the appendix and often secondary to, or associated with, appendicitis.

The surgical problems, then, are enlarged when these patients with colonic lesions seek aid in the earlier and most favorable period.

I trust that during the next few years we shall see great strides in the surgery of the stomach and the colon. We have done so much for gall-stones, for appendicitis, for pelvic lesions, for lesions of the kidney, that we should catch up and bring surgery of the stomach and colon to an equal footing. In doing this we will save, by far, a larger number of patients who are suffering with cancer.

It is my opinion that the more rapid development of surgery of appendicitis, strangulated hernia, gall-stones, and pelvic lesions, is due to the fact that the danger of delay was more obvious, because more immediate, while in lesions of the stomach and colon the dangers are more remote. In addition, surgery of the former is less difficult than the latter.

INTESTINAL OBSTRUCTION

I have recently studied some 285 cases of intestinal obstruction of which I have records in the surgical pathologic laboratory. The medical aspects of this abdominal lesion resemble those of acute appendicitis. As stated before, the dangers of appendicitis are abscess and peritonitis. The sequence of events from the initial symptom is rapid. The patient is either dying of peritonitis or intensely ill with abscess, or on the pleasanter road to recovery at the end of three days. Appendicitis of the acute type is a much more common lesion than intestinal obstruction. My records show about one case of intestinal obstruction to ten of appendicitis. Naturally both the practitioner and the surgeon have had greater opportunity to be educated in the earlier diagnosis. In addition, the operative problem in appendicitis is simpler than in intestinal obstruction.

In the study of these cases of intestinal obstruction I can make out marked improvement in the earlier recognition and, of course, the operative mortality only in one group admitted to the surgical clinic. This group is strangulated external hernia, inguinal, femoral or umbilical. It is also true that the number of cases is less each year. This must mean that patients in greater numbers are subjecting themselves to the radical operation for hernia in the earlier period of the reducible stage. Although the number of cases of strangulation is smaller, however, yet these patients have come to the surgical clinic earlier, and gangrene, peritonitis, and death from auto-intoxication are very rarely observed. But the same is not true of other types of intestinal obstruction.

I then compared the cases of intestinal obstruction admitted to the clinic from the outside with those that arose in the hospital. These cases are chiefly postoperative. The difference in the duration of time from the symptom of onset to the operation was in great contrast as was the operative mortality. The surgeon, therefore, in the hospital wards had been trained to recognize intestinal obstruction in the earlier period in which the operative mortality is least.

The chief acute abdominal lesions which the general practitioner may expect are acute appendicitis, acute pelvic inflammatory lesions, intestinal obstruction of the various types, perforation of gastric and duodenal ulcers, acute pancreatitis, gall-bladder colic and acute cholecystitis, renal colic and acute infection of the kidney. Most of these lesions begin with epigastric or general abdominal pain associated with nausea and vomiting, and most patients give a history of previous constipation and indiscretion in diet. The usual diagnosis is acute indigestion; the usual treatment, catharsis. The maximum symptoms are to-day, as a rule, recognized, but in this period the chances of recovery are extremely slim in many of the lesions. Ochsner, of Chicago, well expressed the proper attitude of the physician toward a cathartic in the presence of acute abdominal symptoms. I have heard him make this statement:

For those lesions in which a cathartic is indicated its postponement will do no harm, while for those lesions in which it is contra-indicated, the cathartic may be a factor in the fatal result.

Unfortunately an ill human being has been educated to expect and demand immediate relief of symptoms. Patients should be educated to the proper attitude, which is—diagnosis before treatment. They cry for morphin and usually get it; from their cradles they have been educated to the domestic cathartic. The suggestion of washing out the stomach is abhorred. As a rule there is even objection to an enema.

With symptoms such as abdominal pain, vomiting, one should most carefully observe the respiration and with the gentlest palpation examine for muscle spasm. Tenderness and muscle spasm, thoracic respiration, leukocytosis and obliteration of liver dulness are very early symptoms. A very careful inspection and palpation will as a rule make the physician suspicious in the very early stage of an acute abdominal lesion. Such cases should always be examined again in from two to four hours. In this early and perhaps doubtful stage it will be better for the patient to be sent to the hospital, if convenient, for further observation. Delay for surgical consultation at the home, where the surgery which may become necessary cannot be done, is but loss of precious time.

We all know that perforation of gastric, duodenal and intestinal ulcer should be recognized within four hours and operated on within six. Acute hemorrhagic pancreatitis will, I am sure, show the lowest mortality when the peritoneal bloody exudate containing the toxic ferment is removed by laparotomy within twenty-four hours, or sooner, and the pancreas drained. Operations between this time and the third day have an increasing mortality and after the third day operations are usually unnecessary, because the patient is either dead or recovering.

The story of appendicitis need not be repeated. That the probabilities of recovery without operation from acute cholecystitis, with or without gall-stones, is so large has been an influence to postpone operation when the acute symptoms in the right upper quadrant suggest gall-stones. It is quite impossible to differentiate acute hemorrhagic pancreatitis, perforation of gastric and duodenal ulcer, an inflammation of the appendix situated high up on the right side, or an intestinal obstruction in the upper portion of the jejunum, a case of acute cholecystitis with very marked symptoms.

Differential diagnosis cannot here be discussed in detail, but the symptoms of the acute abdominal lesions are there in the early period, if one will only look and feel for them and not mask them with morphin, and it is unnecessary to make them more pronounced by the administration of a cathartic. Abdominal pain which requires repeated doses of morphin usually indicates something more severe than a stone in the gall-bladder or kidney. It has been my experience that the indication for a second dose of morphin should be looked on as a call for operative exploration.

Intermittent abdominal pain of the type of colic without diarrhea is one of the earliest signs of obstruction. In these early hours the physician rarely palpates for von Wahl's loop through rectum or vagina or from above. The indistinct and rapidly passing wave of peristalsis is seen only by the keen eye of the close observer.

Gastric ulcer with its complication — cancer, and benign lesions of the colon with, perhaps, their secondary results — cancer, represents a group of more or less chronic abdominal troubles, the first warnings of which are often overlooked by the patient and perhaps more often treated but not diagnosed by the physician.

The danger of delay in gall-stones is less serious. The mortality of operation for stone in the common duct is about 9 per cent., for stone in the gall-bladder or cystic duct very much less than 1 per cent. So there is no argument which can combat this evidence against early operation on inflammations and stone in the gall-bladder. Gall-stones and cholecystitis, however, give by no means the typical symptom of gall-bladder colic. In my experience there is a large group of cases in which jaundice and gall-bladder colic are absent. These patients suffer from various kinds and degrees of epigastric pain or colic, or different types of indigestion of a lesser degree. In the last year I remember distinctly two patients whom I sent to the hospital to be admitted to the ward. As usual, they were seen and examined by the resident physician in charge before being admitted to the ward. After the history was taken and the examination made, admission was refused, because it was considered that they were out-patients for the medical clinic and not for the surgical wards. Only when they later presented letters which I had written, did they gain admission. In one of these cases the gall-bladder was packed with stones, in the other there was a marked chronic cholecystitis with pericolic adhesions.

It is to be understood that this progress depends on the education of the public; that physicians must be better diagnosticians; that the public must aid the profession by enlarging the functions and numbers of the laboratories of the health departments, so that they may aid in this earlier diagnosis, and—most important of all, perhaps—the surgeon must be prepared to make the diagnosis in this earlier period and perform the operation with a minimum mortality, and the assurance of the highest percentage of permanent results.

GRAVES' DISEASE

I wish to call attention to a lesion about which there is much discussion as to when there should be resort to surgical intervention. There are certain symptoms which are called thyrotoxic, or those of hyperthyroidism, which when fully developed produce a well-known and easily recognizable disease called Graves' or Basedow's disease, exophthalmic goiter, or hyperthyroidism. The evidence of surgical experience shows positively that in the more advanced and late stages the mortality of the operation is higher, the postoperative convalescence and disability longer, the chances of recurrence and secondary operation greater, and the possibility of a permanent cure less. Yet, in this later state surgery at the present time is practically the only treatment which offers the patient any chance.

There is no doubt that patients in the early stages may recover after proper medical treatment. In this stage, however, there should be no mortality from surgical intervention, the postoperative convalescence and disability shorter, the assurance of a permanent result greater. There is but one contra-indication of operation in this early stage—the skin scar.

A surgical operation, in any event, should be but a part of a well-planned medical treatment which has for its object mental and physical rest. Why should not surgery interfere in the least dangerous period, even if it interferes now and then unnecessarily?

904 North Charles Street.

A NEW APPARATUS FOR ADMINISTERING AND WARMING GENERAL ANESTHETICS AND NEW METHODS OF ADMINISTRATION

RAYMOND C. COBURN, M.A., M.D.
NEW YORK

I have devised a new apparatus primarily for the administration of nitrous oxid and oxygen, the chief aim being simplicity, utility and portability. I have also perfected two new methods of administration: ether by the closed drop method, and the warm vapor method, whereby the vapor of all anesthetics by all methods is warmed to body temperature at the time it is inhaled. Several other original and practical features will appear in the following description:

APPARATUS

A light stand is provided for holding two cylinders each of nitrous oxid and of oxygen. The supporting standard has slip, instead of threaded, connections with the base and the top bearing the cylinders so as to be quickly assembled and dissembled. Small rubber tubing leads from the top of the stand to an 8-liter gas bag,

the neck of which is attached to a metal fitting, which carries a shut-off and air vent operated together, and is attached to one end of the anesthetic chamber. This opening of the chamber is quite large and through it the necessary gauze may be easily and quickly placed within. As the chamber is ample in size it is never packed, but just loosely filled, with coarse gauze. To the top of this chamber is attached the anesthetic cup, which has a needle-point valve controlling the flow of the liquid anesthetic to the chamber containing the gauze. As the anesthetic drops from the cup it can be seen plainly and the amount accurately regulated by the needle-point valve. The liquid anesthetic is added by a mechanical drop method, thus insuring it to be regular and constant, and at the same time the flow is in sight and under complete control of the anesthetist.

The other end of the chamber is attached to the inhaler, which has an expiratory orifice that is open when the exhalations are to escape, and closed when there is rebreathing. The inhaler carries an inner tube in which are two light and delicately constructed valves,

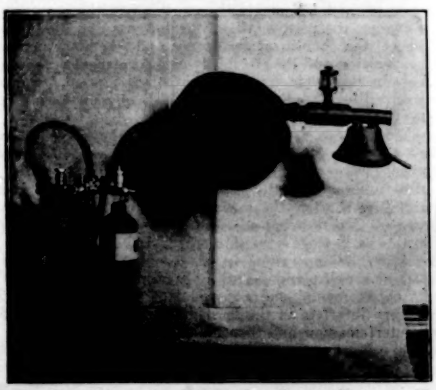


Fig. 1.—Apparatus for administering nitrous oxid-oxygen with ether attachment, one cylinder of each gas in position.

so arranged that they are thrown out of action when there is rebreathing, and, when the exhalations are to escape, one valve prevents breathing back into the bag during expiration, and the other prevents any air from being inspired through the expiratory orifice during inspiration, the change from one form to the other being easily and quickly made by simply turning the knob through an angle of 90 degrees. The expiratory orifice always directs the exhalations away from the patient's face and field of operation. Through this orifice, the expiratory valve can be plainly seen, and its movement in the open method always shows whether the patient is actually breathing, while the movements of the bag furnish this valuable information in the closed method.

To the other end of the inhaler is attached the face mask, which is made of transparent celluloid or of metal, and of such a shape that when the rubber hood is inflated it fits the face very accurately.

The cup, chamber and bag, when in position, ordinarily extend back over the patient's head, but by reversing the mask on the inhaler, they may be extended over the patient's chest. The cup can always be maintained in an upright position, no matter what may be the position of the patient's face, by turning the chamber on its connection with the inhaler. When the ether attachment is not needed, the cup and chamber may be removed and the bag fitting attached direct to the inhaler.

A small and light electric heater, with a flexible cord which may be connected to any lamp socket (either direct or alternating current), is attached by spring clamps to the chamber, and it thoroughly warms all the anesthetic vapor. This heater can be attached and detached at any time without removing the inhaler from the patient's face or disturbing the anesthetic in any way. There is what might be termed a small rheostat a short distance from the heater for controlling the radiation.

METHODS OF ADMINISTRATION

When ether is administered by the closed drop method the stand and tubing are not used, unless oxygen is administered to prevent anoxemia. Otherwise the air vent is left slightly open, enabling the patient to inhale a small amount of air with each inspiration from the bag, and the amount of rebreathing controlled by the proportion the air vent is opened. Ethyl chlorid is

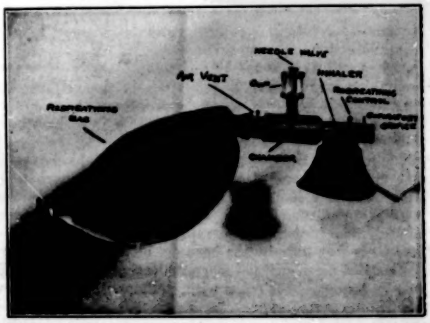


Fig. 2.—Same apparatus as in Figure 1, with stand and tubing disconnected.

administered by the closed method by spraying this anesthetic into the bag through the air vent, or through the rubber stop-cock (Fig. 2).

When ether, anesthol, ethyl chlorid and chloroform are administered by the open method the bag is disconnected, thus permitting of a free supply of air and no rebreathing. The administration of the anesthetic, excepting ethyl chlorid, is controlled by the needle-point valve. As the exhalations escape at the expiratory orifice, instead of passing over the gauze, much less of the anesthetic is used.

Warm Vapor Method.—For ether by the open method one of the two higher grades of heat is used; and for the other anesthetics and methods one of the two lower grades of heat is sufficient. The hand holding the mask to the patient's face constantly furnishes the information as to the temperature of the chamber. For ether by the open method, it should be kept as hot as the hand can well tolerate it (120-125 F.), and for all other use it should be at about 100 to 105 F., or just merely warm. There is no practical way of holding the mask to the patient's face except by thus placing the hand in

intimate relation to the source of heat—a very practical, efficient and constantly acting safeguard.

The Closed or Rebreathing Method.—As the breathing-space of my apparatus is ample throughout, and the bag placed close to the patient's face, it throws no extra work on the respiratory process in rebreathing, as in the case in which the patient breathes back and forth through a long tube. With a patient breathing rapidly (about thirty respirations per minute under nitrous oxid) and expiring 500 c.c. into a mask and a 30-inch tube of 1,000 c.c. capacity, it is certainly evident that none, or but very little, of the expiration reaches the bag before the next inspiration takes place, and that this inspiration consists almost entirely of a mixture of the previous expiration and the contents of the mask and tube. Consequently the patient continually inspires a higher percentage of carbon dioxid and a lesser amount of the anesthetic than would be the case were the bag placed close to the patient's face. In other words, when the bag is close to the face there is a retention of a less amount of carbon dioxid with the same amount of rebreathing, or with the same amount of carbon dioxid retained there is a longer period of rebreathing. Therefore it is a matter of economy as well as a better scientific principle to dispense with the long tube and place the bag close to the patient's face, and an extended clinical experience with both methods clearly establishes this proposition.

Another and decided advantage of having the bag and anesthetic chamber close to the patient's face is that it enables the anesthetist to watch the movements of the bag, the dropping of the anesthetic and the patient's face all at the same time. He can thus concentrate his attention on a small space.

In order to ascertain the temperature of the vapor inhaled when ether is administered by the open drop method, I placed a specially constructed and delicately calibrated thermometer within an inch of the gauze in the herein described inhaler—the approximate distance of the patient's respiratory passages from the gauze of the usual open mask—and, since the expirations did not influence the thermometer, this gave the temperature accurately of the inspired vapor. Sufficient ether for a light anesthesia quickly reduced the temperature to 55 F.; a moderate anesthesia to 45 F.; a deep anesthesia to 35 F., and a profound anesthesia to 32 F., operating-room temperature 75 F.

After determining the temperature of the cold vapor I attached the electric heater to the ether chamber and I found the temperature then to vary from 80 to 88 F. (average 84 F.) in a room temperature of 75 F. In other words, the electric heater raised the temperature of the vapor on an average 42° F. by the thermometer. But in this apparatus, after passing over the thermometer the vapor passes through 3 inches of a metal tube maintained at a temperature of about 110 F., which further elevates the temperature of the vapor several degrees, and, on account of a low specific heat of gases, the vapor was warmed to practically body temperature at the time it was inhaled.

ADVANTAGES

1. The design, construction and operation are reduced to the basic principles of simplicity.

2. Each and every one of the inhalation anesthetics can be administered by all the different methods in common use. It can be easily, quickly and thoroughly sterilized, and above all else it is practical.

3. Being compact in design, light in construction and easily assembled and taken apart, the entire apparatus, together with sufficient nitrous oxid and oxygen for two hours' anesthesia, can be readily carried in an ordinary handbag.

4. The whole apparatus is not expensive; any parts not wanted need not be purchased. As it covers the entire field for general anesthetics by the oral-nasal route, no other equipment is needed except for the highly specialized methods. It saves one-third of the cost of all anesthetics administered by the open method, and reduces to an absolute minimum the cost of the anesthetic by the rebreathing method.

5. For nitrous oxid administration it furnishes a light and compact stand for holding the proper number of cylinders, and places the rubber bag close to the patient's face. The stand is absolutely rigid with slip connections. It affords practical means for administering ether by a new method—the closed drop method, which is the logical and scientific complement of the open drop method. For ethyl chlorid administration by the open method, it insures that the anesthetic will always be completely vaporized and diluted before being inhaled. It thoroughly warms the vapor of ether by the open drop method. It always shows whether the patient is actually breathing—no matter what anesthetic is used or method employed. It warms the vapor of all anesthetics to practically body temperature at the time it is inhaled. It reduces the administration of ether to a scientific basis—any desired rate of administration can be obtained in the open, semi-open or closed methods and maintained with absolute constancy. In the open method it prevents the waste of the anesthetic from vaporization by the expirations. It furnishes a compact, light, convenient, practical and scientific means for administering all the general anesthetics by all the ordinary methods. It affords the utmost possible conservation of the patient's energy.

Bretton Hall, Eighty-Sixth Street and Broadway.

THE USE OF NITROUS OXID AND OXYGEN TO MAINTAIN ANESTHESIA AND POSITIVE PRESSURE FOR THORACIC SURGERY

STERLING BUNNELL, M.D.
SAN FRANCISCO

Although there are many forms of apparatus for differential pressure, we are still in need of a reliable and simple one that will enable us, in any hospital, to safely open the chest. Most forms of apparatus are either cumbersome and costly or unsatisfactory. The Meltzer and Auer method is the one in greatest favor at present and again proves the rule that in surgery, as in other lines, the guide to success is simplicity and efficiency.

In the method to be described, the differential-pressure apparatus is the size of a jack-knife and there is no more difficulty in applying it than in giving the ordinary gas and oxygen anesthesia.

Nitrous oxid with oxygen has the following advantages over ether as an anesthetic for thoracic work:

1. It is the only general anesthetic which will allow the continuous application of a mask to the face throughout the operation. Ether causes the collection of mucus in the throat, coughing, vomiting and such

relaxation that the tongue falls back into the pharynx. These emergencies, which are practically not encountered when nitrous oxid and oxygen are used, make the face-mask impracticable with ether and necessitate either a catheterization of the trachea or the enclosing of head or body of patient in a cabinet.

2. No pump of any kind is needed.

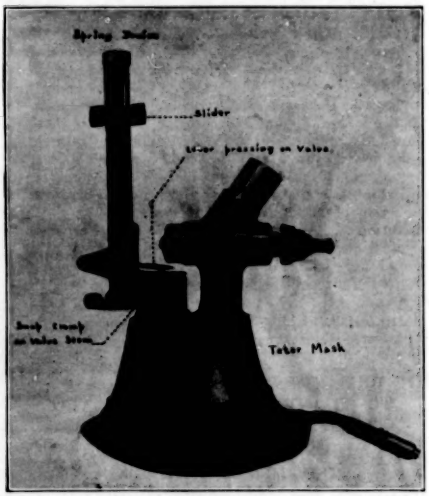
3. Nitrous oxid and oxygen is the safest anesthetic; compared with ether, there is little or no shock from gas, and shock and lowering of resistance are important factors in causing death following operations within the chest.

4. Nitrous oxid does not irritate the lungs as does ether.

5. Actual cautery may be used on ends of bronchial tubes as nitrous oxid is not inflammable.

The disadvantages of nitrous oxid and oxygen are as follows:

1. They are expensive (about $6 an hour, or $3 an hour with nitrous oxid generator in the building).



An attachment to the ordinary Teter mask for administering gases which raises the pressure so as to prevent collapse of the lung in operations on the thorax. The spring device is shown snapped in place on the valve stem of the Teter mask. It is the only special apparatus needed for positive pressure.

2. There is often a faint cyanotic tinge with this anesthetic when not sufficient oxygen is given; for instance, in some alcoholic patients who need a relatively greater amount of nitrous oxid than oxygen to keep them anesthetized. It has occurred, though very rarely, that patients with weak myocardium have died under this anesthetic, so theoretically it might happen that this extra work of the heart to compensate for the cyanosis in a patient of lessened lung capacity may lead to dilatation.

PRINCIPLE

The expansion of the nitrous oxid and oxygen, as they are allowed to escape from their storage cylinders, furnishes the positive pressure. The mixed gases are delivered into a mask and can escape only when they are under sufficient pressure to force open an exit valve, which is closed by a spring set at the desired pressure.

As the patient inhales, the valve closes, and he inhales nitrous oxid and oxygen. As he exhales, this exit-valve opens and the expired gases escape. This takes place with ordinary anesthesia with the Teter gas-and-oxygen-apparatus without differential pressure. The pressure on the valve, which is the only open part of this respiratory system, is then atmospheric pressure. When the spring device is applied physiologic conditions are not altered, but a little additional pressure is added to atmospheric pressure on the valve. It is the same as if the head of the patient were in a cabinet with pressure at a little more than atmospheric (say at 768 instead of 760).

The pressure in the mask can never exceed this amount because the valve will open, and it can never fall below this amount because of the flow of gases into the mask. The result is that the pressure in the respiratory system remains practically constant, so long as there is sufficient flow into the mask. It will be seen that the lungs will remain inflated to any desired degree, and if an extra large gush of gas should rush from the tank, the impulse is not visibly transmitted to the lungs, but merely spends itself through the exit-valve.

THE APPARATUS

The only special apparatus needed is a small spring device. This is made to snap on to the valve stem of the mask of the regular Teter nitrous oxid and oxygen apparatus which is in general use throughout the country. As can be seen in the picture, the slider is set at any desired point and presses the spring that pushes the lever which presses the valve of the Teter mask. Thus, the position of the slider controls directly the degree of inflation of the lungs. The device could, of course, be made to fit any other nitrous oxid and oxygen machine, such as the economical rebreathing apparatus of Gatch, or of Boothby.

DIRECTIONS FOR USE

The patient should first have morphin, gr. 1/4, and atropin, gr. 1/150; less nitrous oxid will then be required. One person should give the anesthetic and another should manage the mask and pressure. When the chest is about to be opened, the spring device should be snapped on to the valve on the mask and the slider moved down to the mark corresponding to 8 mm. Hg. This extra pressure is not noticeable in the breathing, and now when the chest is opened the lungs do not collapse. The mask should be kept snugly on the face with the pneumatic brim well inflated. If it does not quite fit, a towel permeated with petrolatum should be looped around it. This will make it air-tight. In adjusting the position of the slider, one should be governed entirely by the degree of inflation of the lungs. They should be kept almost flush with the chest-wall. Great care should be taken to move the slider slowly. It will be found that at all times one can cause a great inspiration by suddenly moving up the slider, thus removing the pressure. A sudden collapse of the lung is the greatest stimulus to an inspiration and is a terrific shock to the patient, as such collapse never occurs during life. Sudden releasing of slider should be carefully avoided and used only to cure apnea.

The lungs should never be allowed to bulge into the wound but should be brought up to it as the chest is closed.

Before the operation the nitrous oxid and oxygen apparatus and mask should be gone over while it is under water and all leaks should be repaired with adhesive plaster. Much gas may be saved by so doing.

The experimental basis for this work was done in August, 1909, and through the extreme courtesy of Dr. Crile, of Cleveland, I was allowed to carry out in his laboratory experiments on dogs, make pulse-tracings, etc.[1] Since then I have tried the method on more dogs and on three human subjects.

The first impression is that the irregularity of the flow of gases endangers the lungs to sudden bursts of pressure. This is not the fact. The exit-valve is a safety-valve and, being large, it never allows the pressure to exceed the amount for which the slider is set. Clinically the degree of inflation of the lungs is not visibly altered by the irregularities in the flow of gases but remains constant and under perfect control by the position of the slider. The elastic contracting force of the lungs themselves is exactly counterbalanced by the slight increase of pressure within them; and the size of the lungs, even with both pleural cavities open, is then easily influenced by the expansion and contraction of the chest-walls which closely surround them. In expiration it is as easy for the gases to pass down the trachea and push the lung periphery ahead of it, to follow the receding chest-wall, as it is for air to enter the chest through the wound, so it will be seen that the inflated lungs expand and contract during the thorax operation to the same extent that they do in ordinary quiet breathing. The chest-wall excursions are slightly greater than in quiet breathing, though with much reserve ability and not in the least labored. The valve opens and closes rhythmically with respiration and the quiet hissing of the gases escaping through it can be heard at each expiration. With a greater flow of gases a slight hissing is heard in inspiration also.

Some hospitals, as St. Luke's in Cleveland, have a nitrous oxid generator in the building and the gas is stored under pressure, piped to the operating room, and by virtue of a reduction valve is delivered at a low pressure. The cost is thus reduced to almost one-third.

The spring device may be used for artificial respiration, for by moving the slider up and down the lung can be rhythmically filled with oxygen and allowed to collapse. In case the chest is not open, the slider may be moved down without danger of overdistention, but with the chest open it should be moved not more than to the one-half inch mark, which corresponds to a pressure of 8 mm. Hg.

REPORTS OF CASES

Case 1.—Patient: Mr. V. Operator: Dr. W. I. Terry. Anesthetizer: Dr. Edith Williams. This patient was so exhausted from prolonged and fetid bronchitis that when he came to the operating room he was moribund and cyanosed. This was not a complete test of the pressure method as the lungs were held from total collapse by universal adhesions. The apparatus did, however, maintain as good or better ventilation than there was before the chest was opened and cyanosis was never marked and could always be driven away by turning on more oxygen. The ear remained pink. Parts of three ribs were resected, allowing a wide opening of the left pleural cavity. During the fifty minutes this hole was open, the degree of inflation of the lung could be perfectly controlled and sufficient ventilation was maintained. Occasionally, from manipulation of the lung, the patient would stop breathing but could always be made to breathe at once by rhythmically moving the slide. Sudden release of pressure was always followed by an inspiration even when in apnea. When the pressure was temporarily discontinued, just to see the result, the lower half of the lung made large excursions and the respiration became labored. (The patient lay on the sound side.) Before the opening of the chest, when ether was being used, the patient coughed constantly. The coughing ceased entirely when nitrous oxid was used and from then on there was no cause to remove the mask from the face. A large bronchiectatic cavity was opened and the chest was closed except for a drainage-hole, which was covered by a rubber dam, and a dressing was applied. On removing the increase of pressure, the respiration became labored as the deossified chest-wall made great excursions, and soon cyanosis appeared and the pulse quickened. The resumption of positive pressure immediately relieved the condition till a larger and firmer dressing could be applied.

The patient died in seven hours, but owing to his former condition and the gravity of the operation, this was not surprising. Also no caution was used in allowing sudden lung collapse by suddenly releasing the slider and this causes reflex shock.

Case 2.—Patient: Mrs. M. Operator: Dr. Thomas W. Huntington, at the University of California. Anesthetizer: Dr. Mary Botsford. After performing an amputation of the breast, a cancerous piece of chest-wall, 3 by 4 inches, was removed, including part of the third, fourth and fifth ribs. This hole remained open for thirty-five minutes, during which time there was not the slightest unfavorable sign. The lungs remained pink and constantly inflated to just the right amount. The lung moved to and fro for about half an inch to 1 inch following the respiratory movement of the chest-wall and was sufficiently still to have any operation of reasonable delicacy performed on it.

The degree of inflation of the lung could be controlled to a nicety by simply adjusting the slider and the lung was kept almost flush with the parietal pleura. When a sudden burst of gas would come with a rush from the cylinder, it spent itself entirely through the valve and the impulse transmitted to the lung was not observable. Though the pressure varied in the tubes of the Teter machine, the pressure in the lungs remained constant, as it could never rise above the pressure on the valve. Respiration was not in the least labored nor hardly perceptibly changed, and its rate kept between 25 and 30. The wound was closed with skin and the patient was sent to bed in good condition after an operation lasting two hours and twenty-five minutes. The lung was free from adhesions, making this a rigid test for efficiency of the apparatus. It must be said, and without a qualification, that the apparatus worked perfectly. The patient awoke at once, had no shock, and with the exception of a slight hematothorax, which eventually disappeared, made an uninterrupted recovery.

Case 3.—Patient: Mr. K. Operator: Dr. W. I. Terry. Anesthetizer: Dr. Mary Botsford. Pressure applied by Dr. W. I. Baldwin. This patient had a large, three-year-old, encapsulated sarcoma of the chest-wall which was crowding the right lung, and a resection of it was attempted as a palliative operation. A piece of the anterior chest-wall, 7 inches in diameter, including the clavicle and first four ribs, was severed from all but its connections posteriorly and along the great vessels, during which time the chest cavity was open. As the lung and tumor adhered, it was necessary to cut across the upper lobe and sew it over. The man was large and a professional athlete and difficult to keep anesthetized with nitrous oxid until considerable morphin was given. Narcosis was then easily maintained. At one time, through an avoidable error, the flow of oxygen was interrupted and the patient became cyanosed and ceased to breathe. As soon as the oxygen tank was again connected, the spring device was used as described for artificial respiration and breathing was resumed. The chest cavity was kept open for one hour and twenty-two minutes, during which time the degree of inflation of the lung was always under control and, barring the exception mentioned, respiration was maintained without any embarrassment of breathing. The lungs did not collapse and never were in the least overdis-

1. Report of these experiments on dogs, pulse-tracings, etc., can be found in the California State Journal of Medicine, January, 1910.

tended. They were kept almost flush with the chest-wall and receded from the opening about an inch with each inspiration. The condition of the patient remained good through two hours of operating and then, owing to the great amount of hemorrhage, the pulse became rapid and the incision was rapidly closed, intending to complete the excision in a second operation.

The patient was in an exsanguinated condition and lived but twelve hours, 82 yards of gauze having been saturated in the sponging. Throughout the one hour and twenty-two minutes, the pressure apparatus accomplished its share of the operation in a perfectly satisfactory manner and was not in any way the cause of death.

CONCLUSIONS

Nitrous oxid and oxygen has many advantages over ether as an anesthetic for operations in which the pleural cavities are opened and moreover will provide positive pressure.

This small and simple apparatus will, in any hospital, maintain respiration while the chest cavity is open. The method has been found to be easy of application, practical and efficient.

240 Stockton Street.

A STUDY OF THE SIGNIFICANCE OF THE HABIT-MOVEMENTS IN MENTAL DEFECTIVES *

L. PIERCE CLARK, M.D.
AND
CHARLES E. ATWOOD, M.D.
NEW YORK

This small study was originally undertaken for quite other reasons than that stated in the above title. It occurred to one of us (Clark) that in the course of clinical investigations of certain of the spasmophilia, such as the degenerative tics and habit-movements of so-called mental or cerebral type, and the varied forms of myoclonia whose pathogenesis is a neuropathic constitution, one ought to see these disorders most exquisitely in the proved degenerative field of mental defectives. Much to our surprise, on close investigation of the large material at our disposal (over 500 feeble-minded and 600 idiots and imbeciles) in the Randall's Island service, we were able to find but three patients suffering from tic. We might say that we follow the neurologic designation of tic, namely, that type of spasmodic movement occurring in varying degree of excursion, intensity and rhythm after the purpose of such movement has disappeared. We took facial tic as the paradigm of the tic type. Continuing our investigations, we found that while tics, as such, were wanting in mental defectives, even in the so-called highest grade of the feeble-minded, peculiar habit-movements were very frequent, especially in the idiot and imbecile class, some form of habit-movement being seen in the majority of the non-apathetic cases of imbecility and idiocy. The term "habit-movements," as employed here, may be defined as the frequent or constant repetition of uncalled-for and exaggerated movements, which are devoid of convulsive element, but from which the patient seems to derive pleasure or satisfaction. These habit-movements we found most commonly in the idiot class. Pelvic rocking or swaying is an example of such habit-movements. In Figure 1, three adult male idiots are shown in sitting posture engaged in this pastime. The picture was taken indoors with one-fifth second exposure. The middle figure is a colored boy who makes at least sixty excursions per minute forward and back, rocking on the pelvis and banging his back forcibly against the back of his seat. All of these boys are masturbators and have mature sexual development and libido. They belong to the uneducable class.

Many observers of the feeble-minded have made these movements objects of study, but have not usually sharply distinguished between tics and habit-movements. From our data and studies it would seem that tics develop on a neuropathic diathesis, while habit-movements are generated from psychopathic soil, especially on a basis of imbecility and idiocy.

The entire class of idiots and imbeciles (600), on our service, were under study. It may be said that nearly all of the 600 had some kind of peculiar movements of a rhythmic, automatic, imitative or impulsive character. Only those with certain definite habit-movements are noted in our paper. Practically all adult idiots of both sexes are masturbators. About 200 of the 600 had habit-movements. These habit-movements were more common proportionately in idiots under the age of puberty. Especially was this noticeable in the thumb- and finger-suckers. There were extremely few known masturbators

Fig. 1.—A group of rockers, all high-grade adult idiots. The middle one is a colored boy and is making about sixty excursions to the minute. The one on his left has his right thumb in his mouth and with his left hand he grasps his penis. (Exposure 1/5 second.)

in idiots under puberty. We found habit-movements of some sort more common in paralytic idiots than any other class. The paralytics sit or lie down most of the time. All the habit-movements noted bear some relation to or suggest a sexual libido. In adult female idiots with habit-movements, these movements often preceded, led up to or replaced the masturbatic act. In such instances they were intense and when interrupted were replaced by evidences of anger and motor excitement, the patient screaming, jumping about, making violent gestures, biting herself or attacking others. The excitement in such cases is probably less under hospital discipline than it would be in the home without such restraint. The most common forms of habit-movements are volitional and are done because the children like to do them and they seem to be attended by pleasure and satisfaction. Interruption of these patients also causes resentment. A few patients were found who hurled themselves against walls or posts on the floor or beat themselves (masochistic tendencies). These usually show pleasure while doing so, some laughing and screaming with delight.[1]

* Read before the New York Psychiatrical Society, Jan. 4, 1912, and the New York Academy of Medicine, Section of Neurology and Psychiatry, Feb. 13, 1912.

1. This paper makes no attempt to deal with the numerous and important instances of sexual perversion, as such, in the imbecile and idiot class.

Diagrammatic analysis of all the cases studied permits us to group the habit-movements of the idiot and imbecile in three regions of the body. If we accept the fact that these habit-movements are attended by more or less sexual libido, these three regions may be termed, for our purposes, "erogenous zones." An erogenous zone, according to Freud, is that organ, the stimulus of which bestows on the impulse the sexual character. In neurotics the oral cavity and anal opening may behave like a part of the sexual apparatus and become the seat of new sensations and innervating changes in a manner similar to the real genitals when under the excitement of normal sexual processes.

As shown in Table 1, nearly all adult idiots, both male and female, are masturbators, while very few of either sex, under puberty, masturbate. The substitution movements found in young idiots under the age of puberty were mostly finger-sucking, rag-sucking, and pelvic rocking. One idiot, a boy, sucked the thumb of one hand and at the same time with his free hand pushed others away. Another rimmed his mouth with his tongue for hours at a time, producing a circular dermatitis about the mouth (Fig. 2). Seven small boys were hand-biters. One of these was the worst of the five masturbators found in the 197 small boys studied. Six stroked their noses or faces. Five stroked the faces of other boys. One of the latter was seen lying on another boy in the position of copulation while he gently stroked the other boy's face. All of these movements described were carried on, if not prevented, for long periods of time, repeated many times a day, and every day, and were attended in all cases by evident pleasure or satisfaction.

Fig. 2.—J. W., a high-grade idiot under puberty, showing dark spots of dermatitis encircling mouth, caused by constant "rimming" of the lips by the tongue and finger.

Analysis of the males over the age of puberty (Table 2) showed a prevalence of the habit of masturbation and some diminution in the number subject to habit-movements. Of the 120 adult male patients studied twenty-two had such movements. Of these eleven were pelvic rockers or swayers; three biters; one beat himself in the face; another bit others; still another swung his hands to his eyes; one rubbed his head furiously; another rubbed his ears, with his thumbs therein; one chewed his tongue and had a combination of movements (Fig. 3).

Analysis of the females over the age of puberty (200) showed that all were bad masturbators and that twenty-nine had habit-movements (Table 2). The latter number is under- rather than over-estimated. The number of rockers and swayers (twelve) was proportionately greater than in the men. The habit-movements in many cases led up to the masturbatic act. One rocked and pounded her eyes just before the act; another poked her fingers in her eyes, while another pushed her tongue against her teeth and pulled at her teeth with her fingers; still another rubbed one hand with the other and then carried it to her mouth; one put buttons in her ears; two bit their hands, and another pulled one hand through the other; two rubbed their thumbs against the palms, and one entwined her fingers, etc. Nearly all of these patients, like the adult males, are uneducable idiots or low-grade imbeciles. Habit-movements among the adult girls were frequently accompanied by noises such as grunts, squeals, humming, "singing" or barking. There is more active resentment on their part at interruptions.

Fig. 3.—Low-grade idiot in a combination of habit-movements: tongue-sucking and biting, pelvic rocking and twisting of his hands. These acts precede masturbatic orgasm.

Of the seventy-three active girl defectives under puberty fifty had habit-movements and twelve were known masturbators (Table 3). All of the masturbators had habit-movements. The worst types had several of these movements combined. There were ten swayers or rockers, nine biters, eleven finger- and hand-suckers, six rag-suckers, nine either rubbed their eyes or put their fingers in their eyes, one banged her head against the wall, another rubbed her head and masturbated, and three made forcible movements with the thumb or other fingers in the palm.

As previously stated, in making a regional classification of the movements and their purports one finds three rather constant regions or confines on the human body involved: (1) that of the lower trunk embracing the genital and anal zones; (2) the face, and (3) the hands, their frequency or dominance being in the order named. As might be expected, the preponderant rôle of the first

zone is fairly easy to understand, as it is in the normal sexual zone. The second and third zones are not so easily disposed of. It is fairly well proved that the idiot and imbecile show no physical or mental characteristics that are not noted at some period of development in the ordinary neurotic child. Abundant evidence is at hand in the literature of neurotic child study, showing that all these types of habits occur and may or may not persist for a short time only in most cases. All the above movements, as outlined, are phases of the neurotic child habits, but it has been contended that through development and the advancing barriers of shame, disgust, moral and esthetic training, in the neurotic child, repression occurs, or at any rate these habits disappear. May not these types of habits then seem to be a continuance of neurotic infantile habits, often perverted and enhanced by lack of physical and mental development in the imbecile and idiot class?[2]

In nearly all the patients under study the habit-movements were of a pleasurable sort, as forced interruptions were repelled, at times even by violence (Fig. 4). Thus in the case of an adult female idiot, when forced

Fig. 4.—An "interruption." M. G., adult female idiot; a very bad masturbator. She has been interrupted and is furiously biting her wrists through the sleeves of her dress.

to discontinue her rapid rocking just prior to masturbating, she usually bit herself or struck those about her (Fig. 5).

To the lack of an enlarged mental scope of the pleasures of play and recreation must be ascribed a large part of the initiative of these auto-pleasurable acts in the imbecile and idiot class; this lack is also shown in the gregariousness of the feeble-minded. It is a well-known fact that the imbecile and neurotic child gains much petting and fondling and in their absence the child strives to keep up this pleasurable pastime by self-indulgences of rocking, rhythmic movements and other auto-pleasurable acts. As Freud says: "Neuropathic parents should realize that an excess of petting is a nearer way than inheritance to transfer their disturbances to their children." The same may be said of the blind and other sense-maimed children. The progressive mental development which takes place in normal children, however, builds effective barriers against these apparently senseless acts and habits of the imbecile class.

May not these habit-movements be considered to parallel the views of Freud in sex genesis for the normal child as laid down in his well-known essays, "Three Contributions to the Sexual Theory"? We believe they can be so interpreted. Studies of idiocy contribute to our knowledge of normal child development in somewhat the same degree and are of the same value as researches in psychiatry are to normal psychology. Note the promulgation of new methods in normal education following the line of Seguin's plan of an "intellectualization of the senses" seen in the industrial and manual training of our schools, even to the wholesale adoption of the plan in the Montessori method of most recent date. The reasons for the adaptation of methods of teaching the feeble-minded to normal children are not far to seek, as in this middle ground of imbecility the trained pedagogue, psychologist, alienist and physician meet. It is a matter of con-

Fig. 5. A biter. E. P., an adult female idiot and a bad masturbator, has been forcibly posed to show the thickened patches on the backs of the hands which mark the impress of her upper teeth. She fiercely bites the fleshy part of her thumbs.

siderable surprise to us that those studying sex genesis have not observed idiots more thoroughly; the subjects, because of defective will, lack of attention and the absence of the conventional barriers of shame, loathing, disgust and esthetic training, furnish an ideal field, wherein the infantile state may and often does persist throughout a lifetime.

The infantile irradiating non-clustered erogenous or pleasurable zones are prolonged for years. It therefore offers many advantages to study obscure or fleeting phenomena, such as the phases of sexual development of normal children. Unfortunately, subjective analysis is rarely possible either in the normal or the defective child, thus many motives and feeling are lost. Again, there is no great chance for sublimation in the idiot and imbecile; there can be no sex-finding at puberty, hence masturbation, or continuance of infantile erogenous acts and habits with or without masturbation.

2. Granting that training and other factors contribute to the riddance of these abnormal trends of sex development in neurotic children, may not an explanation for the discontinuance of these habits, sexual in character, be found, on still other and more basic grounds, in the developmental adjustment of the whole organism to a maturity in which infantile habits are no longer satisfying?

For years these habits and movements of the idiot, sometimes called "dermal habits," have been explained on the ground that such acts are forms of automatism, propitiations or compensatory manifestations of incomplete will control owing to imperfect external and internal adjustments. These views are not essentially wrong, but they lack finality. The older view is not sufficiently psychobiologic to make the phenomena clear. Let us examine somewhat more in detail our material and see how the matter bears on the abnormal sexuality of these habits.

In observing the continuance of the habit-movements in idiots it was very noteworthy that the movements were much lessened or abolished altogether immediately after pollution acts (Fig. 6). While the carefully observed cases of castration of idiot boys and oöphorectomized girls show that these habits and sexual activities, in more frankly pronounced acts, are much modified or diminished in ardor, very early castrations are necessary to bring about complete cessation of habit-movements and self-pollutions. The fact that these phenomena do not entirely cease in asexualized idiots is a decided point

Fig. 6.—Extreme inflammation and thickening of the eyelids due to the constant habit of picking and rubbing and putting the fingers in the eyes in a low-grade imbecile girl. This habit especially precedes the act of self-pollution and is discontinued for hours afterward.

in favor of the hypothesis that the chemical substances, so-called libidogenous in character, exist in the blood and that the ovaries and testicles are but accessory receptacles in forming the sexuality of childhood.[3]

3. The modifying influence of oöphorectomy on the sexuality in idiocy and feeble-mindedness is well shown in the patients so treated during the last three years at the Randall's Island institution (Table 6). In a material of twenty-one patients ranging from 8 to 43 years of age we find, in an observation period of time of several months to nearly three years after, that as a class six patients were made worse sexually by oöphorectomy, eight were bettered and in seven the condition remained unchanged. Thus only about 38 per cent. were distinctly improved by asexualization. The average age of those bettered was 20 years; that of the patients made worse after operation was about 25 years of age, while the average of those whose sexuality remained unchanged after the operation was 21 years. The crudity of estimating the value of such procedures by age standard alone is shown in the age of the unchanged group, in which the extreme ages of 8 and 43 are embraced. Nevertheless, the main contention of the paper is here shown to be true, that oöphorectomy relatively early in adolescence is attended by best results. However, a careful individual analysis of every patient is always necessary before trying to estimate the degree of benefit to any special patient and one should avoid trying to generalize from a few patients to the whole class of mental defectives. Then the data in regard to the alterations in the whole make-up of the individual patient need to be collected on a large material before we can be sure of oöphorectomy as a prevention to improve the condition of sexual excesses in mentally deficient girls.

The preponderance of the hand habit-movements in the defective boys may be due to the fact that the girls obtain satisfaction in self-pollutions by the pressure reflex of the clasped thighs. On the other hand, exhibitionism and clothes-destroying impulses are much more common in the female idiots than among boys of the same class.

Looking at our subject somewhat more in detail and in the chronologic order of development, the first genetic principle of the development of the auto-pleasurable zone and acts connected therewith is that of pleasure-sucking. The idiot is rarely satisfied with the thumb alone (Fig. 7); he uses all the fingers and in not a few instances passes the whole hand into the mouth. A group of these pleasure-sucking low-grade idiots is also well shown here (Fig. 8). Oftentimes nurses and attendants in idiot asylums permit or encourage pleasure-sucking; in much the same way the nurse allows the normal child the "pacifier" in the nursery. Many idiots fall asleep with their hands in their mouths. This occurs also indifferently before or after meals and is independent of the hunger-impulse. Indeed, the idiot seems most pleased with sucking and rocking after a full meal.

Fig. 7.—Low-grade idiot sucking thumb and two fingers. She usually puts her whole hand in her mouth for the act.

We have found that pleasure-suckers rarely take up other erogenous zones in their auto-pleasurable activities until pleasure-sucking is forbidden. One little patient frankly said: "If mamma would only let me suck my thumb or hair, she would not have to tie my hands for that other habit [masturbation]." Undoubtedly the sensitiveness of the parts to the type of rhythmic sensations employed is more important than the region of the body used. Often the ease of access plays no part. The regions, however, are not unimportant for the maintenance of the acts.

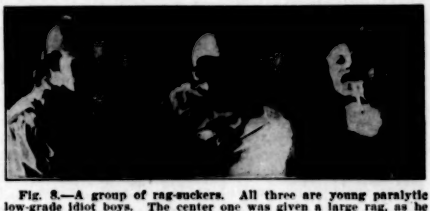


Fig. 8.—A group of rag-suckers. All three are young paralytic low-grade idiot boys. The center one was given a large rag, as he tries to swallow every rag he can get into his mouth.

In the absence of sublimation or opposite sex-finding at puberty for idiots, they masturbate, or if incompletely transformed in the changes at puberty they continue their infantile auto-erogenous habits and acts. Asylum attendants and teachers still look on the sex perversion as the cause rather than a part of the mental defectiveness, and, of course, labor in vain to remove these "bad

habits." Sexuality is thus seen as a moral question and not as a biologic concretion of developmental facts.

The whole phase of mechanical excitation and movements, both passive and active, is bound up in biologic laws of development. This fact is well shown in the contrast and comparison of the tables of habit-movements of the juvenile paralytic with the active idiots. Apparently the former (the paralytics), through a forced inactivity, present a striking excess of these movements over the latter class. As is well known, it forms a part of child hygiene, that a free active life diminishes the tendency to an overdevelopment of the sexual libido. Often before being required to do various disagreeable acts, as bathing in cold water, changing clothes, etc., the idiot propitiates and anticipates the disagreeable by more intensive applications of his habit-movements. No idiot asylum is without its musical equipment for dancing and swinging. While not a few dance fairly well, the "swayers and rockers" are in the majority and are inordinately fond of all music with well-marked rhythm. The muscular activity and physical restlessness of the lowest grade of idiots are only compensated for, in the eyes of the attendants, in that many of these activities are rhythmic and repetitional.

As to what is the final explanation of the real satisfaction of these psychosensory movements of the idiots no one can say, as the whole subject is novel and imperfectly understood even in normal children. While there is wide variation in the manifestations of individual habit activity in idiots, the types of movements are constant. Certain kinds of movements are enduring; in other patients during later development other new movements are substituted, and in others they are lost in habit training (sublimated in part) by systematic education in vogue, such as occupational and sense training. It may be possible that one may train these vicarious and accessory activities of sexual expression into hopeful purposes of activity, as Freud states the roadways are probably passable in both directions. However, the possibilities in this respect remain in the domain of speculation.

Many idiots cease mental development at puberty or even earlier. Such cases of premature development often show extreme sexual and moral perversion. The precocity and exhibitionism of the idiot class have rightly caused pessimistic views in teachers on the educability of such pupils.

Side by side, the male and female imbeciles occupy themselves in the pleasurable content of their autopleasurable acts; but at puberty the male imbecile becomes restless, insubordinate, difficult of control and given to vicious practices, often including many of the petty offenses against person and property; while the female imbecile takes on regressive characters of indolence, neglect, perversions of sexual habits or the life of a prostitute. What are the changes in the internal economy of these two types, propelled by a common sexual impulse, yet taking such widely variant roads? These intermediary transitions in either sex are not known, but must be subjects of painstaking research. This we do know, that the transition is favored by the internal and external adjustments and the psychic reception of these stored impressions.

Finally, we may say that the adult continuance of the auto-erogenous acts is not only a sign that the individual idiot is of a low type, but that his chances of betterment are minimized because he carries with him another evidence of infantile mental make-up. In other words, he is mentally and physically defective in his sexual sphere, as in other faculties of mind and body. Unfortunately, one has no chance to open the amnesic period of ordinary childhood to subjective analysis, much less the idiot mind for the same developmental period.

At every part of the long roadway of sexuality the idiot may digress or be waylaid by habits which in themselves carry the hall-marks of his inability to advance.

To not a few following this tentative study of the significance of the habit-movements, the criticism will seem pertinent that we have surrendered too much to the views of Freud, the recognized master in this field, or that Freud has been too inclusive in the definitions and descriptions of the sexuality of childhood. However this may be, we can only answer that, taken at a conservative valuation, no work has been so pertinent to our inquiry as his has been. We are therefore willing to stand with him and say, so far as we are able to observe, that the significance of the habit-movements and apparently senseless acts of idiots are irrevocably bound up with a defective and perverted sexuality of infancy and childhood, and we believe that more exact and worthy data of the future along this line will only confirm this opinion.

In conclusion we would say that this study is presented not alone as a contribution to the academic issue of the biologic significance of the habit-movements in idiots, but also that it may help to make clearer and sharper the distinction of slight grades of mental defect now under analysis in the feeble-minded delinquent class in which sexual misdemeanors and crimes are calling for trained psychiatric analysis and suggestions for corrections.

EXPLANATION OF TABLES

In this study it is admitted that masturbation *per se* should not be considered as a type of habit-movement. Masturbators are considered in the tables and text merely for contrast and comparison with habit-movements and for their correlation with sex genesis and gratification and the interpretation of the phenomena of these movements. The omission of masturbators from the table of classified groupings of the habit-movements

TABLE 1.—COMPARATIVE ANALYSIS OF TOTAL DATA AS TO SEX, AGE AND MASTURBATION OF 608 IDIOTS AND IMBECILES, ACTIVE AND PARALYTIC

Adult males		120
Masturbators	120	
Habit-movements	22	
Adult females		200
Masturbators	200	
Habit-movements	29	
Boys under puberty		197
Masturbators	5	
Habit-movements	100	
Girls under puberty		92
Masturbators	13	
Habit-movements	50	
Total masturbators of all ages and both sexes		338
Total with habit-movements		201

TABLE 2.—ANALYSIS OF 320 ACTIVE MALE AND FEMALE IDIOTS OVER PUBERTY

	Male (120)	Female (200)
Pleasure-suckers	0	0
Biters and tongue-chewers	5	3
Face-stroker	1	0
Eye-strikers	1	2
Lip-stroker	0	1
Aural inserters	1	1
Head-rubber and pounder	1	0
Rotators	0	5
Pelvic swayers and rockers	12	12
Thumb-rubber	1	0
Hand- and finger-rubbers	0	5
Total habit-movements	22	29
Masturbators (practically all)	120	200
Masturbators (practically all)	320	
Habit-movements (both sexes)	51	

diminishes the apparent importance of the pelvic zone as compared to the others.

Tables 3 and 4 strikingly illustrate the greater frequency of habit-movements in the paralytic as contrasted with those in the active juvenile idiots. Tables 2 and 3 contrast the relative preponderance of habit-movements in the juvenile idiots over those seen in the adult cases; and the inverse frequency of masturbators in these two classes.

TABLE 3.—ANALYSIS OF 223 ACTIVE BOY AND GIRL IDIOTS UNDER PUBERTY

	Boys (150)	Girls (73)
Pleasure-suckers	17	17
Biters	9	9
Face- and lip-strokers	13	0
Pelvic rotators	4	0
Pelvic rockers and swayers	10	10
Fingers in eyes	0	9
Head- rubber or pounder	0	2
Palm- and finger-rubbers	0	3
Total habit-movements	53	50
Masturbators	3	12
Masturbators (both sexes)	15	
Habit-movements (both sexes)	103	

TABLE 4.—ANALYSIS OF SIXTY-SIX PARALYTIC BOY AND GIRL IDIOTS UNDER PUBERTY

	Boys (47)	Girls (19)
Pleasure-suckers	23	12
Pelvic rockers and swayers	8	6
Rotators	3	0
Total habit-movements	34	18
Masturbators	2	1
Masturbators (both sexes)	3	
Habit-movements (both sexes)	52	

TABLE 5.—CLASSIFIED GROUPING OF 201 CASES OF HABIT-MOVEMENTS, ARRANGED WITH REFERENCE TO THE LOCATION OF THE EROGENOUS (FREUD) ZONES

Face and head zone, total		123
Pleasure-suckers (fingers, rags, tongue, lips, etc.)	75	
Biters (hand, tongue, etc.)	14	
Strikers and rubbers of eyes	13	
Strokers of own or other faces	13	
Pounders of face and head	6	
Aural inserters (fingers and foreign substances)	2	
Pelvic zone		66
Pelvic rockers	12	
Rockers and swayers	54	
Hand zone		12
Rubbing, pulling, entwining fingers and hands.		

TABLE 6.—SHOWING RESULT OF OOPHORECTOMY ON SEXUALITY IN IDIOCY AND FEEBLE-MINDEDNESS *

Name	Age (Yrs.)	Time Observed	Result
M. B.	21	2 yrs., 5 mos.	Made worse.
E. L.	31	4 mos.	.....
L. R.	14	2 yrs., 1 mo.	Improved.
M. H.	22	6 mos.	Unchanged.
M. R.	22	8 mos.	Made worse.
R. M.	14	4 mos.	Improved.
R. H.	..	5 mos.	Made worse.
L. G.	37	9 mos.	Made worse.
K. D.	23	6 mos.	Improved.
S. C.	30	2 yrs., 5 mos.	Improved.
A. D.	25	7 mos.	Made worse.
C. H.	20	2 yrs., 10 mos.	Improved.
F. F.	16	1 yr., 5 mos.	Unchanged.
D. M.	23	2 yrs., 4 mos.	Unchanged.
J. R.	29	3 mos.	Improved.
L. W.	43	2 mos.	Unchanged.
E. T.	15	2 yrs., 1 mo.	Unchanged.
S. S.	..	2 mos.	Improved.
C. R.	17	6 mos.	Improved.
L. J.	20	11 mos.	Unchanged.
L. F.	18	2 yrs., 3 mos.	Unchanged.

* This table is inserted through the courtesy of the Randall's Island surgical staff, who operated for diseased conditions and for other purposes than those of this paper.

84 East Fifty-Sixth Street; 14 East Sixtieth Street.

A NEW METHOD FOR CONTROLLING THE ADMINISTRATION OF SERUM IN EPIDEMIC MENINGITIS

PRELIMINARY NOTE *

ABRAHAM SOPHIAN, M.D.
NEW YORK

At present I am compiling my records of about 200 cases of meningitis in which, in all, about 600 lumbar punctures were done. Most of the cases were studied in the present epidemic at Dallas, Tex. I thought it would be desirable, before waiting for the compilation of the complete records, to write a preliminary note on an improvement in the method of administering intraspinally the antimeningitis serum which I have been using for the past seven months and which I believe has now definitely proved its efficiency and superiority over the old method of administration.

The present method of standardizing the antimeningitis serum, as generally accepted, is by determining the opsonic index and by similar immune-serum tests. There is, however, no measure of efficiency placed on the serum such as we have in the case of diphtheria or tetanus antitoxin; the dose is therefore measured entirely by volume. Since the serum acts principally by its local action, the idea was, and still is, to introduce as much serum as possible without injury. It was believed that, after removal of a quantity of cerebrospinal fluid by lumbar puncture, one could, to a certain extent, reestablish conditions in the central nervous system by injecting an equal or slightly smaller volume of serum. Thus in an ordinary, moderately severe, case in an adult, if one withdrew 45 c.c. of cerebrospinal fluid, an injection of 30 c.c. of serum would be safe and ample, while in a severe case one would be justified in injecting 45 c.c. or more of serum.

It is seen by analyzing this method that one hopes and believes that conditions are established, but one has no proof. On this assumption many severe symptoms occuring either during or a few hours after an injection had been attributed to the disease proper. Undoubtedly toxemia, in some cases, accounts for the symptoms; an analysis, however, of many cases would make one suspicious that possibly the symptoms, in some, were the direct result of the injection, especially when they occurred immediately during or after the operation.

I had been dissatisfied with the old method for a long time. There was no reliable guide indicating the quantity of serum one could safely inject. It occurred to me that if one could make determinations of the cerebrospinal fluid pressure during the operation, one might so have a definite guide, the idea being to inject serum only in sufficient quantity to bring the cerebrospinal fluid pressure to the original reading before the removal of fluid. In that way one would cause least disturbance or shock. To obtain such result was evidently the reason for instituting the old arbitrary method. I therefore began to take cerebrospinal fluid pressure readings during the puncture. After withdrawing a quantity of fluid, which reduced the pressure to normal, I attempted to inject serum in sufficient quantity to raise the pressure to the original reading before the removal of fluid. Thus, if the initial cerebrospinal fluid pressure reading was 400 mm. (water-pressure), I removed the fluid till the pressure dropped to normal, or below,

* From the Research Laboratory of the Department of Health, New York City.

usually to between 20 to 100 mm. I then attempted to inject serum in sufficient quantity to raise the pressure to about 400 mm. I shall not cite cases in this paper; the results by this method, however, were misleading and unreliable as indicating the true intracranial pressure. Theoretically one would expect a return to the original pressure on injecting a volume of serum equal to the cerebrospinal fluid withdrawn; this was not the case. One could inject even larger quantities of serum than fluid withdrawn, but the pressure-readings were frequently lower than the initial reading before the removal of fluid. Even with readings showing a lower intracranial tension after the injection of serum, one would meet severe, even very dangerous, symptoms. I learned very quickly that this method was misleading and even dangerous. I believe that the error was very probably mechanical and that the later readings were not a true index of the intracranial tension. It is very probable that injecting serum, even with little pressure, would produce a local distention of the subarachnoid space at the site of injection and give readings which did not make a true picture of the uniform intracranial pressure.

I now began to study blood-pressure during lumbar puncture, especially with reference to the effect on injection of serum. I have now made blood-pressure readings in about 200 cases of meningitis, making from 500 to 700 lumbar punctures. I have found almost uniform results in blood-pressure-change on injecting serum, and have applied those changes as a guide to the quantity of serum that could safely be injected. The blood-pressure-change was also frequently a guide, indicating the quantity of fluid that could be withdrawn safely. In a later paper I shall refer in detail to Robinson's work[1] on blood-pressure in meningitis, and to Cushing's[2] studies on the relationship of blood-pressure to change in intracranial pressure.

The effect on the blood-pressure is inconstant on withdrawing fluid by lumbar puncture in meningitis; most often there is a drop in blood-pressure, occasionally quite large, especially on withdrawal of large quantities of fluid. My ordinary procedure in an adult case, beginning with an average blood-pressure of 110 mm. of mercury, is to stop the further withdrawal of fluid if there is a moderate drop in blood-pressure, for example of 10 mm. of mercury; in children, of 5 mm. Occasionally the blood-pressure begins to drop very quickly as soon as the removal of fluid is begun; the blood-pressure then is a guide indicating how rapidly or slowly the fluid may be withdrawn. In other cases there is no change in blood-pressure, or there may even be a rise, on removing fluid; one can withdraw as much fluid as possible, usually till the cerebrospinal fluid pressure is normal, this being roughly measured by counting the drops of fluid as they flow from the needle; one drop of fluid every three to five seconds corresponds roughly to a normal pressure.

After withdrawal of a suitable quantity of cerebrospinal fluid, the serum is ready to be injected. As usual, the serum is warmed to body temperature and then injected slowly, either by the gravity method or by syringe. I much prefer the gravity method of injecting the serum; it has many advantages and few of the disadvantages of the syringe method. As a rule, as soon as the injection of serum is begun, the blood-pressure drops and continues to drop steadily. Reasoning by the old method of injecting serum, one would expect a rise in blood-pressure; this, however, is rarely the case. As stated, in the great majority of cases when the injection of serum into the subarachnoid space is begun, the blood-pressure drops and continues dropping steadily as the larger quantity of serum is injected; after there has been a material drop, for example, of 20 to 30 mm. of mercury, the blood-pressure begins to drop relatively much faster if more serum is injected. Thus if an injection of 15 c.c. of serum causes a drop of 20 mm. of mercury in blood-pressure, injecting only a few more cubic centimeters of serum may cause a sudden drop of 40 more mm. of mercury, making a total drop of 60 mm. or more. In one robust adult whom I treated, there was a drop of 30 mm. of mercury after injecting only 12 c.c. of serum. His was a very severe case, and I wished to introduce as much serum as possible; I injected 3 c.c. more, making a total of 15 c.c. of serum. His blood-pressure, at one bound, dropped 30 mm. more, making a total drop of 60 mm. His clinical signs at this time did not indicate shock; the pulse was fair; the color was good, but rapid, but breathing was shallow and a little irregular. I decided, however, to watch him for a time. A few minutes later he suddenly stopped breathing, then his heart stopped. Immediate active treatment, which I shall indicate later, gave immediate response. It is easy to see how these patients who have had a large drop in blood-pressure, with not much other evidence of shock, may thus suddenly succumb either during or after the injection.

My usual technic in the operation of administering serum is to have one assistant take blood-pressure readings throughout the whole operation. If the blood-pressure drops during the removal of cerebrospinal fluid, I use it as a guide indicating when to stop withdrawing fluid. I accept, as a rule, the arbitrary drop of 10 mm. of mercury. I use the blood-pressure as an absolute guide, indicating the quantity of serum that I can safely inject; here it is also a guide as to how quickly the serum may be injected. As a rule, very rapid injection under considerable force will cause a greater drop in blood-pressure. By the gravity method the serum is allowed to run in slowly by gravity, the funnel being raised or lowered to regulate the flow. The barrel of a 10 to 15 c.c. antitoxin syringe may be used as the funnel, attached to about 12 inches of rubber tubing about one-quarter inch in diameter. Ten minutes is a good average time to allow for the fluid to run in, though I have frequently taken twenty minutes or longer, especially in cases beginning with a low blood-pressure, or when the blood-pressure dropped very quickly. It is much harder to control the rate of injection by the syringe method and one may accidentally use too much force in injecting. I have found that a total drop of 20 mm. of mercury in an adult with average blood-pressure of 110 to 120 mm. of mercury is a safe indication to stop the further injection of serum. Occasionally there is an initial rise in blood-pressure after the injection of a few cubic centimeters of serum, followed by a subsequent drop as larger quantities of serum are injected. Very rarely the blood-pressure shows a material rise after the injection of serum.

Since I began using this method, the average dose of serum that I have used has been considerably smaller; frequently not more than 15 c.c., averaging 20 to 25 c.c. in adults and in proportion in children. When the blood-pressure has allowed, I have injected larger quantities also, 30 to 40 c.c., very rarely more. Judging by the good results with the smaller doses of serum, I believe that it is very rarely necessary or beneficial to inject more than the maximum of 40 c.c. of serum. The

1. Ayer: Clinical Laboratory Bull. No. vi, November, 1910.
2. Cushing: Bull. Johns Hopkins Hosp., 1901, xii, 290.

method is of great benefit not only in the average case, but also in the atypical and difficult one; thus in cases with thick plastic exudate, when the fluid will not flow through the needle, it is a beautiful guide, absolutely indicating how much serum one can inject safely under pressure; similarly, in cases with little exudate, in which one introduces a larger quantity of serum than the cerebrospinal fluid withdrawn. If the fluid be injected into the subarachnoid space, under wrong diagnosis, in cases with posterior basic meningitis, the drop in blood-pressure will be very large after injecting only a few cubic centimeters. The blood-pressure is also a guide in injecting serum directly into the ventricles, in cases of posterior basic meningitis.

What clinical symptoms are associated with the drop in blood-pressure? In the order of their appearance these are: Stupor, which deepens more and more as the blood-pressure falls; respiration becomes superficial and irregular, at times deep, stertorous, slow and irregular; with a large drop in blood-pressure, breathing may stop suddenly; pulse will often continue good, even with a large drop in blood-pressure, and even with marked change in the breathing; at times the pulse becomes slow and irregular; the pulse therefore, is very often misleading; the pupils dilate, increasing with the greater drop; incontinence of feces and urine occurring during a lumbar puncture usually accompanies a drop in blood-pressure, and is a warning.

What is the immediate treatment for severe symptoms during or after the injection of serum? As already indicated, with a material drop in blood-pressure, further injection of serum should be stopped. If, however, the blood-pressure suddenly drops very much, possibly accompanied by the above-mentioned symptoms, the indication is immediately to remove fluid from the canal; if one uses the gravity method for injecting, this is easily done by lowering the funnel; in bad cases in which the breathing stops, as much fluid as possible should be removed and active artificial respiration begun. Epinephrin in large doses by intramuscular injection, and other vasomotor stimulants, and atropin help. Even with severe symptoms, if these measures be applied immediately and actively, the patient usually responds.

What effect has epinephrin administered by intramuscular injection, before the puncture in preventing the symptoms mentioned? Epinephrin administered before the puncture will tend to prevent the large drop in blood-pressure on injecting serum. I prefer not to use epinephrin in this way except in cases with initial low blood-pressure.

In reference to the use of general anesthetics during the operation, I shall say here, briefly, that in my experience general anesthesia is dangerous, and that it should be used only where absolutely necessary in violent patients. During the administration of an anesthetic the blood-pressure is a comforting guide. I have found that giving many patients water through a straw will keep them quiet; even delirious adults will reflexly suck on the straw and quickly become quiet. During the operation the patient will sometimes drink as much as nine or ten glasses of water. It acts especially well with children; I have referred to it as "water anesthesia."

I am now tabulating my results, since I have used the blood-pressure method in treatment. Most of the cases were studied in the present Texas epidemic. The results were extremely good. The general reaction following the injections was usually not as severe as formerly; temperature did not rise as much; the patient was usually more comfortable and the general condition better. The dose of serum, as stated, was much smaller; very young children about or under one year especially, at times could not bear more than 2 to 3 or 4 c.c. of serum and, in a number of cases, responded wonderfully well. In 185 cases, roughly tabulated, the total mortality was 25 per cent., this including many patients who were brought to the hospital in very bad condition. A number were brought in during the very last stages, and some were brought in from a distance of up to a hundred miles; others, with pulmonary edema, who died a few minutes later. Excluding these apparently hopeless cases in which the patients died in from a few minutes to twenty-four hours after admission, the mortality was about 10 per cent. The cases considered hopeless were marked so on the chart immediately on admission.

Most of the meningitis cases studied were in adults; many patients were past middle age; they included negroes and whites. The mortality was highest among negroes; they seemed to offer little resistance, and easily developed bronchopneumonia. In children the mortality after exclusion of apparently hopeless cases was roughly about 5 to 6 per cent., among them a number being below 1 year of age. There were also about seven cases of posterior basic meningitis on the list.

CONCLUSIONS

1. The old method of administering serum is inaccurate and sometimes dangerous.

2. Blood-pressure change is a very accurate guide to the quantity of serum that can be safely injected, frequently also indicating the quantity of cerebrospinal fluid that can be withdrawn.

3. The average dose of serum as controlled by blood-pressure is smaller than by the old method.

4. Following an injection of serum, controlled by blood-pressure, the after-effects are usually much less severe.

Mortality figures which will be accurately tabulated later show unusually good results.

I desire to express my thanks to Dr. A. W. Nash, city health officer of Dallas, Tex., with whom I studied the cases in the City Hospital, Dallas, for his courtesy in allowing me to use the hospital records, and for his very valuable cooperation in the studies.

210 West One Hundred and Seventh Street.

What the Doctors Have Done.—"Now and then someone abuses the medical profession, and often the funny man springs a joke at the expense of the doctor, but for all that," remarks the *Herald*, Palestine, Tex., "he is a crusader whose work needs no boosting and whose ministrations have been of inestimable value to the world and to mankind. The laity appreciate him most and understand him best as a combater of epidemics and contagious diseases. And his work has been little less than marvelous. To begin with, the discovery of all ethical doctors is based on an obligation that as soon as he has found a remedy, a preventive or cure for disease, he must give it to the world and to the profession without reserve and without cost. And through his research and sacrifice the dread of small-pox has been almost eliminated, whereas a few short years ago people went into hysterics at its name. And yellow fever has been almost eliminated from the face of the earth. And even the dreaded typhoid fever has yielded some of its horrors to his wisdom and treatment. And now he turns his attention to the latest contagion to disturb the happiness of this people, meningitis, and he will in time conquer that. A good doctor is a necessity to mankind, while a crook in the profession is a disgrace to humanity."

AN OPERATION FOR PROLAPSUS UTERI

WITHOUT DISTURBANCE OF ANATOMIC RELATIONS AND WITHOUT THE NECESSITY FOR ABDOMINAL SECTION *

BARTON COOKE HIRST, M.D.
PHILADELPHIA

Turning the uterus upside down and fixing it in the vagina, hysterectomy, suspending the uterus high on the abdominal wall near the umbilicus, burying it in the muscles of the abdominal wall, injecting quinin or paraffin in the pelvic connective tissue, are examples of the bizarre and unanatomic procedures advocated and practiced at present for the attempted cure of prolapsus uteri. It is surprising that operations without the slightest relation to the causes of prolapse, or to the anatomy of the region, should be considered necessary.

For a number of years my clinical material in gynecology has been one of the largest, if not the largest, in a city of a million and a half population, aggregating about 4,000 women a year in the ambulatory dispensaries, outpatient service and ward patients.

It is apparent, therefore, to any one who knows what such patients are, that cases of prolapse of the uterus are commonplaces in my clinics at the University Hospital and the Howard Hospital of Philadelphia, the number in the last ten years amounting to several hundred. Out of all this number, not a single patient has returned on account of a recurrence.

It may be said that one does not see one's own failures; that they go to other men. This is true as a rule, but with the average amount of control over my patients, had my failures reached the proportion admitted by many clinics, I should certainly have seen some of them.

It is probable, therefore, that there is something in the routine procedure adopted, based as it is on anatomy and a study of the injuries resulting in prolapse from the moment of their occurrence to their ultimate consequences, which is giving a better result than is the rule in many so-called gynecologic clinics dealing only with certain phases and with certain stages of the pathologic phenomena peculiar to women.

Further, as there is nothing entirely original in any one of the three steps in the operation for prolapse, with partial or complete inversion of the vagina, it is perhaps to certain details of operative technic that success is due.

There are three injuries responsible for prolapse which must be kept in mind, and there are three regions which must receive attention, in a uniformly successful operation. The three injuries are: (1) The stretching, with possible actual lacerations, of the fibers of the cardinal ligaments of the uterus in the bases of the broad ligaments supporting the cervix, lower uterine segment, and, indirectly, the vaginal vault; (2) the complex injury of the anterior vaginal wall, consisting in (a) an over-stretching of the longitudinal fibers of the fascial plate derived from the bases of the broad ligaments, extending downward between the bladder and the vagina; (b) a lateral separation of these fibers by the eccentric pressure of the child's head in labor; (c) a glacier-like movement of the vaginal wall on its subjacent attachments, tearing them loose; and (d) a laceration of the muscle and fascia of the urogenital trigonum, the only support of the lower third of the anterior vaginal wall; (3) a laceration of the levator ani muscle in the posterior vaginal sulci, with a certain amount of that glacier-like movement of the posterior vaginal wall noted in the anterior wall.

With the ultimate results of these injuries we are all familiar: the elongation of the lower uterine segment, the descent of the uterus, especially the lower uterine segment and cervix, the inversion of the vagina, the protrusion of the posterior vesical and anterior rectal walls and the detachment of the vaginal walls from their subjacent tissues so that they descend further than any of the pelvic structures, to the grade of complete inversion and entire emergence from the body.

With the anatomy of the pelvis clearly understood and with the facts in mind as to the original injuries and their results, it is simply a question of surgical carpentering to remedy each defect and to correct it permanently.

The problem presented is to shorten the elongated lower uterine segment, to shorten the elongated cardinal ligaments of the uterus, to insure an anterior position of the latter, to restore the anterior and posterior vaginal walls and their subjacent structures *ad integram*.

TECHNIC

This, I contend, can be done by the following operative technic:

The cervix is seized with double tenacula in each lip; the uterus is pulled as far out of the body as it will come. A longitudinal incision is made in the anterior vaginal wall its whole length. A circular incision is made around the cervix. The anterior wall is dissected free from the bladder and the uterovesical ligament is cut. The cervix is amputated above the internal os; the cervical canal is then dilated and the uterus curetted. The lateral and posterior sutures for an amputated cervix are inserted but not tied. Then a curved needle threaded with No. 3 chromicized catgut (40-day) is passed with the point turned downward through the base of the left broad ligament, then transversely through the anterior wall of the corpus uteri as high as possible without opening the peritoneum; then through the base of the right broad ligament, again with the needle point down. By making this ligature tense and pushing the detached bladder up, the laterally dislocated edges of the fascia are plainly marked; they are brought together in the middle line by figure-of-eight sutures of catgut No. 3 (40-day), the needle always being inserted from above downward to avoid the ureters. These sutures are usually three or four in number. When they are tied, the orifice through which the bladder prolapsed is firmly closed. The redundant vaginal wall is cut off. The anterior sutures for an amputated cervix are inserted. The cervical sutures are tied. A few transverse sutures unite the anterior vaginal wall over the sutures joining the pelvic fascia.

The posterior vaginal wall and the pelvic floor are strengthened by an extensive Hegar operation as follows: A fold of mucous membrane in the middle line just below the cervix is seized by a hemostat. Two Allis intestinal forceps are fastened to the labia majora a trifle above the original level of the posterior commissure of the vulva. By pulling the center of the posterior vaginal wall to one side with tissue forceps, it is possible to draw a straight line with a knife from the hemostat to one Allis forceps. The same is done on the other side. The triangle thus marked is partly stripped, partly dissected off. The upper part of the triangle is closed

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by a double-tier catgut suture, the middle portion by transverse deeply inserted vaginal sutures of silkworm-gut, shotted to facilitate their removal. The perineal body and the lower third of the triangle are united by transverse silkworm-gut perineal sutures, knotted on the external skin surface of the perineum.

A CASE OF DIABETES MELLITUS ASSOCIATED WITH TUBERCULOSIS OF THE ADRENAL GLANDS

CHARLES M. MONTGOMERY, A.B., M.D.
PHILADELPHIA

The following case deserves to go on record for a number of reasons, chiefly because of the association of diabetes mellitus and tuberculosis of the adrenal glands, and also because of the occurrence of apparently primary tuberculosis of the adrenal glands. The notes on the previous history and the diabetes and the adrenal glands are given in full; the other notes are abbreviated.

For the privilege of reporting this case I am indebted to Dr. Alfred Stengel, to whose service at the University Hospital the patient was admitted. The case records were encountered while making some investigations in regard to diabetes.

History.—J. O., a man, aged 45, farmer, native of Pennsylvania, entered the hospital on Jan. 20, 1902, and died there five days later. Diagnosis: diabetes and consolidation of the left lower lobe. The patient's father died of pleurisy, his mother of an unknown cause; one sister died of lung trouble. Two brothers are living and well. There is no rheumatic, nervous or neoplastic history. The patient had the usual diseases of childhood including scarlet fever. He did not recall any other diseases.

Present Illness.—Eighteen months ago he began to void larger amounts of urine, the quantity thereafter gradually increasing. He likewise lost weight and became very weak. A physician was consulted who now states that the patient had been under his care for the past twelve months suffering from diabetes. One week ago he contracted a cold and since then has had pain in the left breast and cough with abundant expectoration.

Physical Examination.—The patient's gait was unsteady from weakness and there was marked tremor. He complained of feeling cold and the skin was moist and clammy. He had pain in the left breast and cough with mucopurulent expectoration. There was some dysphagia. Nutrition was poor. The muscles were poorly developed and wasted. The complexion was cloudy. The conjunctivæ and scleræ were pale. The pupils reacted to light and accommodation. There was no edema and no cutaneous eruption. There was slight labial herpes. The pulse was weak and slightly irregular, and the superficial vessels were slightly sclerosed. The patient complained of dryness of the throat; his breath was fetid and also had an odor of acetone. The nails of the fingers and toes were normal except for slight clubbing. There was no thyroid or lymphatic enlargement. The heart was negative except for some irregularity and weakness of the sounds. There was diminished expansion on the left side and localized tenderness with signs of some inflammation over the lower lobe, later developing into signs of consolidation. The abdomen was negative except for some rigidity.

Sputum: The sputum was thick and yellowish and slightly blood-streaked. Streptococci were present and tubercle bacilli were mentioned, but with a question mark, indicating lack of certainty as to their identity.

Urine: January 21, clear, light amber, no precipitate. Specific gravity, 1024. No albumin. Sugar, 3.5 per cent. Indican, a trace. Urates and a few epithelial cells. January 23, specific gravity, 1028. No albumin. Sugar, 3 per cent. Acetone and diacetic acid present. January 24, specific gravity, 1026. Sugar, 2.5 per cent. Acetone present. The amount of urine varied between 38 and 40 ounces in twenty-four hours.

Blood: January 21, hemoglobin 54 per cent. Erythrocytes, 3,940,000. Leukocytes 10,600.

The temperature varied between subnormal and 99 3/5, the pulse between 78 and 120 and the respirations between 18 and 27. The patient's condition remained much the same till the day of his death. The record states that he died suddenly in the morning.

Necropsy.—This was performed twenty-four hours after death, by Dr. Pearce.

Anatomic Diagnosis: Gangrene and abscess of the lungs. Acute serofibrinous pleuritis. Fatty degeneration of the heart and liver. Cloudy swelling of the kidneys. Chronic interstitial pancreatitis. Atrophy of the right adrenal. Acute splenic tumor. Multiple superficial erosions of the esophagus. Atrophy of the thyroid gland (?). Arteriosclerosis.

Histologic Diagnosis: Slight chronic interstitial pancreatitis. Tuberculosis of the adrenals.

Bacteriologic Diagnosis of Abscess from Lung: *Streptococcus pyogenes, Staphylococcus pyogenes aureus, Bacillus coli communis.* Spleen sterile.

The lungs and pleura were normal except for the condition above described which was limited to the lower lobe of the left lung. The body was well developed, greatly emaciated and free from pigmentation. There was no mention of the bronchial lymph-nodes. The mesenteric lymph-nodes were normal. The pancreas was smaller and firmer than normal. The shape was more distinctly triangular than usual. The surface was grossly nodular, the irregularity being increased while the spaces between the lobules of the pancreas were depressed or filled with serous fluid. On section an increased firmness was evident which was found uniformly throughout the pancreas. The duct was patent. There were no adhesions. The microscope revealed a slight increase of connective tissue throughout the pancreas. The islands of Langerhans were negative.

Right Adrenal: A small tense firm mass was found in the position of the right adrenal. It did not measure over 1 cm. in diameter. On section it was found to be made up of dense white tissue quite firm and fibrous, relieved here and there by small yellowish brown areas, the color of the normal cortex of the adrenal. The microscope revealed extensive caseous tuberculosis. Small masses of normal adrenal were present. Attached to the right adrenal was a ganglion in which a dense growth of connective tissue had taken place.

Left Adrenal: The left adrenal was larger than normal, both the cortex and medulla being apparently proportionately increased. The cortex was chrome yellow, the medulla white, glistening and lard-like in appearance. Under the microscope the cortical cells showed moderate pigmentation (fine yellow pigment). The center of the medulla was moderately infiltrated with lymphoid cells.

In the literature I have found only one or two other cases of tuberculosis of the adrenal glands in diabetes. One of these was described by Ogle,[1] each adrenal gland containing a small patch of fibrinous material in the center. I mention this case because it is referred to by Naunyn[2] as one of tuberculosis of the adrenals. The other case is Rabé's,[3] in which the adrenal glands were totally destroyed by tuberculosis. In this case the author considered that bronzed diabetes and Addison's disease coexisted.

In the case now reported it seems to have been a mere matter of coincidence that the diabetes and the tuberculosis of the adrenal glands were associated in the same individual, and there is no evidence to show that any causal relationship existed between the two diseases.

905 Pine Street.

1. Ogle, J. W.: St. George's Hospital Reports, 1866, i, 178.
2. Naunyn, B.: Der Diabetes Mellitus, 1906.
3. Rabé: Cirrhose hypertrophique pigmentaire d'origine diabétique, Bull. Soc. anat. de Paris, 1900, p. 459.

AN INSTANCE OF UNUSUAL SENSITIVENESS OF THE COLON TO MERCURY

DOUGLASS W. MONTGOMERY, M.D.
SAN FRANCISCO

The study of the disagreeable effects of drugs is most profitable and enlightening to the physician, as the disagreeable manifestation, whatever it may be, is only an exaggeration, in the individual in question, of some one or of a group of the usual actions of the drug. The individual, whose case is here recorded, exhibited, for example, an unusual sensitiveness of the lower bowel to mercury. In all probability the lower bowel in everyone reacts to the stimulus of mercury, and in anyone this stimulation may go on to the production of a dysenteric diarrhea, bloody stools, erosion and even ulcerations of the colonic and rectal mucous membranes.

Furthermore, when prescribing a drug it is a profitable therapeutic exercise to review quickly at least some of its main actions; that, for instance, calomel acts as a biliary, renal and general glandular stimulant, and also that it stimulates the mucous membranes, especially that lining the large bowel.

Patient.—A stout, full-blooded man applied for treatment Dec. 20, 1908, saying that he had acquired syphilis eight years previously. The primary sore had been followed by a suppurating bubo and by sores in the mouth.

Examination.—When he first came to me he had patches of skin disease situated over each elbow tip. These patches were very itchy, especially at night. The one on the right forearm was an ordinary thickened, lichenified patch of eczema, while that on the left forearm consisted of two ringed, focal, slightly infiltrated but excoriated lesions, and was diagnosed as a syphilid modified by eczema. There was also opalescence of the mucous membrane behind each corner of the mouth.

As far as the gastro-intestinal canal was concerned, he presented the usual state of affairs found in those robust individuals that love to eat heavily: constipation, a coated tongue, yellow conjunctivæ, increased stomach tympany, clapotage, dulness over the descending colon, and a history of having had piles. The movements of the bowels were scanty, and the patient was addicted to saline purgatives such as Hunyadi Janos water. The skin of the face and in fact of the whole body was florid.

The patient said his mother and two sisters suffered from eczema.

Treatment.—While prescribing for the patient's eczema it was determined also to give him a course of salicylate of mercury injections. The suspension used was one part of mercury salicylate to nine parts of liquid petrolatum.

Fifteen minims of this were injected into the buttock. The next morning I was called to see the patient, who was suffering from a severe dysentery with tenesmus and bloody stools. Every few minutes he would arise, suffering the most severe bearing down pains, with excruciating pain across the abdomen below the navel. He attributed his trouble to ptomain poisoning from eating some boiled beef. Not being able to refute his theory I prescribed the usual remedies.

Dec. 29, 1909, he was given another similar injection, but this time of 12 minims. On returning to see me the following month he said the injection had been followed by the same symptoms as the first one, and intimated that the injection was the cause of the trouble. He then also remembered he had suffered the same way after an injection given by the late Dr. Edward Perrault, and that he had had much the same symptoms while taking a course of mercurial rubbings at Arkansas Hot Springs. There was now no doubt of the sensitiveness of the bowel to mercury. The form of mercury used by Dr. Perrault and myself was the same, but that used in the rubbings in Arkansas Hot Springs was probably mercurial ointment. It was therefore the mercury that was the real factor in the case.

Slighter grades of this symptom of mercurialism are frequent; but its occurrence in such an exaggerated form, on giving a moderate dose of a mercurial salt, is rare. All my records were lost at the time of the earthquake and fire, April 18, 1906, but a couple of years ago I had occasion to make a list of patients treated with salicylate of mercury injections. Fifty-eight patients received in all 433 intramuscular injections. The usual dose was 15 or 20 minims of a 10 per cent. mixture of the neutral salicylate of mercury. In none of them did any of the above symptoms of mercurial colitis develop. Usually the only disagreeable symptoms noticed were the pain at the site of injection, and a slight touching of the gums. The pain is sometimes severe, and comes a short time, maybe an hour, after the injection. One of my patients said that after leaving the office he felt as if he had received "a swift kick," and this describes the pain exactly. Just here we may remark a curious feminine trait. Suffering comes naturally to women, and they even welcome it, often through the pathetic illusion that the pain in itself makes the treatment more effective. Of the fifty-eight patients treated, the two who received the highest number of injections were women. One of them received forty-three injections and the other thirty-five. All courses of treatment have to come to an end sometime, but these two women were so bent on this particular treatment that they begged its continuance.

The salicylate of mercury is not an entirely insoluble preparation. Merck says it is insoluble in water, but slightly soluble in salt solution. It is, however, much less readily soluble than the bichlorid of mercury, and so acts less harshly on the tissues. If properly used it does not leave nodules and scars as the bichlorid of mercury does. My attention was particularly drawn to this by Werther, of Dresden. Sublimate sometimes scars very extensively. In 1902, I treated for about a year, with sublimate injections, a woman who had an extensive late ulcerating syphilid of the face. As through idiosyncrasy she could not take potassium iodid, and mercury by the mouth disagreed with her, and as at that time I was not using the salicylate of mercury, she was given three injections a week of a 2 per cent. solution of sublimate. The patient's buttocks are still badly scarred from the treatment.

The slower absorption of the salicylate of mercury has another advantage. A relatively larger dose than of the bichlorid of mercury may be given, and the injections need not be so frequently repeated. One injection of from 15 to 20 minims of a 10 per cent. suspension given every eighth day is almost always sufficient to control the symptoms, and the control of the symptoms is regarded as a satisfactory indication of the effectiveness of the remedy. One of our patients, with whom the treatment was carried out by a friend, returned not long since suffering from symptoms of irritation of the large intestine. He had pain below the navel, tenesmus and blood and mucus in the stools. He had been carefully directed to get 20 minims of a 10 per cent. mixture of the salicylate of mercury every eighth day. He was, however, given this dose every fifth day, which to my mind is by far too much. In a microbic disease like syphilis one must never lose sight of the fact that there are self-curative elements engendered in the body itself that combat the disease, and that, although mercury is a powerful aid in treating syphilis, the antibodies are probably still more powerful, and that if we through mercury decidedly lower the vital forces, we probably

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also lower the formation of the antibodies, and so do harm instead of good. It is not desired in this paper to enter into the question of the Wassermann reaction, and its relation to antibodies, and its further relation to the question of treatment. It seems perfectly reasonable, however, to suppose that overtreatment, like any other debilitating agency, may lower the patient's resistance.

Opium is the correct drug in the treatment of mercurial colitis, and here arises the very important question of the association of mercury and opium in the treatment of syphilis. Almost always this association is treated as being eminently proper, whereas in my own practice, and in that of my immediate associates, it is very rarely employed indeed. My reason for not employing opium is the belief that the mercury acts as an eliminative, and that the speedy passage of the drug through the body is essential to the success of the treatment, and that as all such drugs as opium decidedly interfere with this elimination they should be used very rarely indeed.

As a further reason for not using opium, Hartung, in an interesting note on "Unfortunate Occurrences in Using Mercurial Injections," mentions with what reluctance he prescribes opium in this association, and then quotes a curious note from Kobert showing the incompatibility between these two drugs. The note runs as follows:

> Remarkable and up to the present not explained is the fact that opium-eaters can take the enormous dose of 1.8 gm. (about 27 grains) of sublimate without injury. It must be assumed that an insoluble combination of sublimate and opium is formed in the bowel.[1]

If opium acts in this way as an antidote to sublimate, it is one of the most interesting facts in medicine, for in all probability a number of the salts of mercury, as for instance calomel, act constitutionally by first turning into sublimate. If, therefore, mercury and opium are prescribed together, as not infrequently advised, the opium may, in a large measure, offset the sublimate and render the treatment ineffective.

Recently Juliusberg has published a report of a most interesting case of poisoning, ending in death, consequent on a course of mercurial inunctions of moderate dosage.[2] There was a rise of temperature, a scarlatiniform eruption, and severe involvement of the kidneys and intestines with no trouble in the mouth. The author takes occasion to refer to the fact that these cases fall into two groups: In one the fury of the drug is spent in the mouth, and in the other, in the intestinal tract and on the kidneys. Of course the case here reported did not show this severity. At no time was the patient in danger of death, nor had he any rise of temperature, or any involvement of the kidneys. After the pain and inconvenience were over he was in perfect health, so far as mercury was concerned. The case showed, however, an unusual sensitiveness of the lower bowel to the drug, and indicated what might have happened if an unusually large dose had been administered. These instances of disagreeable by-effects or of poisoning from mercury are of unusual interest at the present time, when the two drugs, mercury and salvarsan, are on competitive trial. To have some derangement of the bowels on giving mercury is, of course, not rare; to have severe cramps and dysenteric discharges is quite rare; and exceedingly rare, indeed, are those severe cases of stomatitis or of lesions of the kidneys and intestinal tract that lead to death.

1. Kobert: Intoxikationen. 1892, p. 263. Quoted by Hartung: Dermat. Ztschr., January, 1906, p. 73.
2. Juliusberg, Fritz: Ein Fall von schwerer Quecksilbervergiftung, Arch. f. Dermat. u. Syph., Vienna, December, 1911, p. 409.

The administration of mercury, especially of late years, when even the slighter by-effects and symptoms are avoided, must be looked on as being safer than salvarsan. In regard to the comparative efficacy of mercury and salvarsan, opinion is now shaping itself fairly definitely. For example, it is now determined that syphilis should not be treated with salvarsan alone, but that mercury must also be given, and that the chief reliance must be placed on the latter drug. It remains for the future to decide whether we may hope for a better result in the prognosis of syphilis by using both mercury and salvarsan, than if we use mercury alone. We also know that there are certain manifestations of syphilis that are most refractory to mercury and to potassium iodid, such as late palmar syphilids and persistent mucous patches in the mouth that often clear up in an astonishing way after a dose of salvarsan.

323 Geary Street.

A CASE OF SPORADIC CEREBROSPINAL MENINGITIS SIMULATING THE UREMIA OF BRIGHT'S DISEASE

G. W. McCASKEY, A.M., M.D.
Professor of Medicine, Indiana University; Physician-in-Chief to Hope Hospital
FORT WAYNE, IND.

While the occurrence of sporadic cases of cerebrospinal meningitis is generally recognized as a possibility, it probably occurs more frequently than is commonly supposed. It is perhaps true, as Preble has said, that many of the cases which have been so reported are not genuine, but it is quite likely true that many genuine cases pass unrecognized. There is no longer any reason that the diagnosis should remain in doubt. It can be either established or refuted with perfect confidence by suitable bacteriologic examinations of the spinal fluid and blood. That the epidemic form is always due to an infection by the *Diplococcus intracellularis meningitidis*, and that the only cases which should be called sporadic cerebrospinal fever are due to the same organism, are two propositions which appear fully established. Wollstein, e. g., produced fatal meningitis in monkeys indifferently with organisms derived from these sources. Furthermore, the organism appears to be fairly widely distributed, maintaining its viability in the nose and throat of meningococcus carriers much the same as the Eberth bacillus does in the gall-bladder, etc., of typhoid carriers. It is just as reasonable to suppose that sporadic cases of this infection may occur as of typhoid, scarlatina, etc. Koplik says that they are constantly occurring in all large cities, and found in New York several isolated cases of typical posterior basic meningitis due to this organism. The failure of the sporadic case to propagate its kind is no more difficult of explanation than is the similar failure frequently observed in sporadic cases of other infections. It is well known that the virulence of pathogenic microorganisms varies within wide limits, depending on conditions at present unknown whether atmospheric, telluric, electromagnetic, variations in radio-activity, or something else. With low virulence a special susceptibility, a greatly exaggerated vulnerability may be essential in order that the germ may produce its specific effect. Such a condition may present itself on the part of the victims of so-called sporadic infection.

The importance of early and accurate diagnosis in suspected cases cannot for many reasons be too strongly

emphasized, and suspicion should be ever alert. In the first place the mortality is much the same in the sporadic as in the epidemic cases, and this we know is very large. The result, as already indicated, depends not alone on the intensity of the virulence of microorganisms, but also on the personal equation of the patient. Then again, and complemental to this fact, stand the brilliant therapeutic triumphs of Flexner's serum. We may cure the patient by early diagnosis and prompt treatment. We may safely affirm that there is no material distinction between the sporadic and epidemic form of the disease, so far as the individual case is concerned. The specificity of the microorganism and the serum are alike established, and the antimeningococcus serum should be used in both alike at the earliest possible moment.

The following case illustrates one clinical type of sporadic cerebrospinal meningitis, and the difficulties which may attend its early diagnosis:

Patient.—May 26, 1911, I was called, in consultation with Drs. Schwartz and Dickes of Portland, Ind., to see Mr. M., a banker, aged 45. The patient's father died at 72 of paralysis; mother at 40 of consumption; one brother had committed suicide. His health had always been good until present illness began, excepting that he had "considerable trouble with head from eye-strain"; had "granulated lids," and corneal ulcers. His habits were sedentary; he was a hearty eater. About two weeks before examination he began to have daily headaches of rather severe type, with general malaise, but was not compelled to go to bed, and was at his place of business a part of the time. This continued about one week when one evening, about 10 o'clock, he was found unconscious on the floor of the bath-room. A few minutes before this he had been conversing with his family, and nothing unusual was observed at that time. No other data in regard to temperature, pulse, etc., prior to this attack could be obtained.

When first seen by his physician a few minutes later he was entirely unconscious, and cyanotic with embarrassed respiration. He had probably just recovered from a convulsion, as he had a general tonic convulsion with rigid limbs, retracted head, and lacerated tongue about five hours later. He remained unconscious for fifteen or twenty hours, after which he was in a dazed mildly delirious state, which had grown much worse during the twenty-four hours previous to his examination. When seen by me he could be roused with difficulty and could not converse coherently. On the morning following this attack he had a temperature of 103; at time of my visit temperature was 102.8; pulse, 90, full and strong.

Examination.—The patient was an average-sized, well-developed man, of phlegmatic and rather heavy type. The heart was moderately enlarged, with a rough systolic bruit over upper sternal region; aortic second accentuated; otherwise normal. The liver was easily palpable and slightly enlarged. There was no edema. Systolic blood-pressure was 160. Shortly after the second convulsion he was catheterized, the bladder containing only two or three teaspoonfuls of urine heavily loaded with albumin. Several quarts of normal saline solution were thrown into the colon, and in twelve or fifteen hours free diuresis was obtained. The albuminuria persisted for two or three days and then disappeared. A specimen taken to my own laboratory had a specific gravity of 1018, was of acid reaction, and contained neither albumin, sugar acetone nor indican. Microscopic examination was entirely negative. The blood contained 100 per cent. hemoglobin (erythrocytes not counted); leukocytes, 15,000; polymorphonuclears, 72 per cent.; small lymphocytes, 22 per cent.; large lymphocytes and transitionals, 5 per cent.; eosinophils, 1 per cent.

Up to this point, the blood and later urinary findings of course being not yet available, I felt inclined to agree with the provisional diagnosis of uremic convulsions and coma already made. It was apparently well grounded. There was nothing in the case entirely incompatible with it. Two circumstances, however, led me to look further. The first one was the comparative suddenness of the evolution of the symptoms without a definite history of anything pointing in that direction; second, the rather high temperature known to exist during the last week, but which might of course have been incidental.

Further examination showed a well-defined Kernig's sign, perfectly typical in character, and marked rigidity of the neck. I apparently made no note of the pupillary and eye-ground findings, and cannot distinctly recall them. Believing that we might have a cerebrospinal infection to deal with, I made a lumbar puncture. The spinal fluid was so thick that it flowed with difficulty, and was very turbid; about 10 c.c. were procured in a clean bottle which was not reliably sterile so that no cultures were attempted. Two c.c. of blood were taken from the median cephalic vein with a Luer syringe and transferred to sterile bouillon tubes which I always carry. This was done with perfect technic.

The spinal fluid was examined within four hours from the time of its removal, by Dr. B. W. Rhamy, pathologist to Hope Hospital, who reported as follows:

"Examination of spinal fluid, May 26, 1911:

"Fluid cloudy with blood.

"Sediment equals ½ of 1 per cent. of bulk of fluid.

"Blood equals 4/5 of sediment.

"Serum albumin present in large quantity.

"Sediment shows cellular elements with the following proportion of cells:

"Polynuclear neutrophils, 60 per cent.; lymphocytes, 5 per cent.; endothelium, 35 per cent.

"Stained slide shows a few biscuit-shaped diplococci, nearly all of which are in the pus-cells. One polynuclear cell had about twelve pair of diplococci in its protoplasm. These diplococci decolorized by the Gram method. Bacteria correspond to the *Diplococcus intracellularis meningitidis.*"

The blood culture was placed in the incubator and developed a typical growth of the same organism, which was fully verified by Dr. Rhamy to be *Diplococcus intracellularis meningitidis.*

Treatment and Course.—Immediately after getting the report of the pathologist, or about four hours after the examination of the patient, I telephoned the attending physician that it was probably a case of sporadic cerebrospinal meningitis, and that without waiting for confirmation by blood culture I would advise the administration of Flexner's serum. They telephoned to Dr. Hurty, who procured the serum in Indianapolis. At their request Dr. Neu visited the patient, taking with him the serum, which he administered about ten or twelve hours after my examination. The patient was very nearly moribund at the time of Dr. Neu's visit and died several hours later. There was no autopsy.

This patient had the cardiovascular conditions incidental to long-continued high blood-pressure. When in addition to this there was found very scanty urine heavily loaded with albumin the diagnosis of "uremia" from Bright's disease would seem to be fully supported, and yet the comparative suddenness of the onset in ordinary health, the high temperature, and finally the return of completely normal renal function were, it seemed to me, sufficient grounds for scrutinizing it very closely. The cytology and bacteriology of the spinal fluid, together with the bacteriology of the blood of course settled the diagnosis beyond a doubt. The suppression of renal function and the albuminuria were probably the result of venous stasis incidental to the convulsions, further evidenced by the extreme cyanosis and respiratory embarrassment. The convulsion itself was probably an incident of the general infection. The case was not only a fatal sporadic infection with the *Diplococcus intracellularis meningitidis*, but an ambulatory case at that, for at least several days after the development of the disease, as indicated by continuous headache, malaise and probably fever, the temperature being 103 F. at the close of the first convulsion.

407 West Main Street.

CHLORID EXCRETION IN ALCOHOLIC CIRRHOSIS

A. C. BURNHAM, M.D.
NEW YORK

The action of the chlorids in nephritis has been so extensively discussed since the work of Widal, in 1903, and is so significant in certain types of nephritis that the knowledge of any such action in localized accumulations becomes a therapeutic necessity. The paucity of the literature on chlorid metabolism in cirrhosis of the liver has induced me to report the following case in detail.

It is shown that, in this particular case, there was a diminished excretion of chlorids in the urine throughout the course of the disease. The retention of salt was in some cases primary to the retention of water. An increased excretion of water by the kidneys was not accompanied by a proportionate increase in the chlorid elimination.

Shall the practitioner consider the local accumulation of fluid in ascites as inflammatory, and content himself with medication directed to the relief of the inflammation; or shall he regard the fluid as non-inflammatory in origin and attempt to remove it by mechanical means? Or, as a third possibility, do both of these processes play a part with the consequent double therapeutic indication?

In such a common and important condition as the ascites of alcoholic cirrhosis these questions are by no means satisfactorily answered, and there is to-day little or no literature to which one may turn for advice.

Are the diuretics of value in this condition, and if so, which types are indicated? In the present case none seemed to possess more than a transitory influence on either the excretion of water or of salts, and there was no change noted in the amount of fluid in the abdomen after the use of any of them.

History.—The patient, a French chef, aged 66, was admitted to the hospital on April 7, 1910, with signs of a large accumulation of fluid in the abdomen and in an advanced stage of malnutrition. The family history was negative. The patient had always been healthy, had had to work hard and had always taken moderate amounts of alcohol in the form of beer and light wines. He had never been addicted to sprees. The onset of the present trouble was gradual. About a year previous to admittance the patient noted slight dyspnea and palpitation. Six weeks before admission there had been a slight protrusion of the abdomen which had slowly increased. More recently there had been edema of the legs and a diminished amount of urine.

Examination.—There was malnutrition, marked anemia, dyspnea and slight cyanosis. There was no jaundice. The heart was enlarged and there was a systolic murmur. The pulse was regular and of good quality; the vessel-wall was palpable. The abdomen was enlarged, symmetrical, dull in dependent portions and gave a distinct fluid wave. The circumference was 99 cm. at the umbilicus. Temperature was 98.4; pulse, 88; respiration, 20. The blood showed secondary anemia (hemoglobin 50 per cent.) with normal leukocytes. The clinical examination of the urine gave only the very slightest signs of kidney involvement. There was occasionally a very faint trace of albumin and a rare hyaline cast. Often the examination showed a normal urine.

Operations.—Paracentesis was performed five times:

	Fluid in c.c.
April 7	6,720
April 14	4,560
April 25	7,250
May 4	6,950
May 13	6,700

The fluid obtained was examined and was found to be as follows: Specific gravity, 1011. Color, yellow. Cloudy. No coagulum. No sediment. Albumin bodies, 25 per cent.; NaCl, .637 per cent. Differential count showed polymorphonuclear cells, 9 per cent.; large mononuclears, 0; eosinophils, 0; lymphocytes, 16 per cent.; endothelial cells, 75 per cent.

There was slight improvement after each operation, but there was a steady loss of flesh and strength and on May 25 death occurred from inanition.

The urine was examined for sodium chlorid and the daily amount determined. The daily amount of urine and chlorid is shown in the following table. For convenience, the chlorids are calculated in terms of sodium chlorid, although the sodium was not determined. This is accurate enough for clinical purposes. The chlorids of the sweat and feces were not determined.

TABLE SHOWING EXCRETION OF URINE AND SODIUM CHLORID IN A FATAL CASE OF ALCOHOLIC CIRRHOSIS

Date	Amount, c.c.	Specific Gravity	Reaction *	NaCl, gm.	Weight	Regular Diet and Remarks
4/17	560	1,030	+	2.44	.....	
4/18	.....	.....	+	.....	.....	Spec. lost.
4/19	510	1,030	+	2.90	.....	
4/20	340	1,032	+	2.00	141.0	
4/21	290	1,028	+	1.37	141.5	
4/22	.....	.....	..	.....	143.5	Spec. lost.
4/23	770	1,017	+	1.80	144.5	Farinaceous diet.
4/24	1,120	1,009	+	1.03	.....	
4/25	440	1,018	+	1.91	145.0	Paracentesis, 7,250 c.c.
4/26	430	1,020	+	2.13	.....	
4/27	660	1,017	+	2.59	.....	
4/28	350	1,020	+	0.90	133.0	
4/29	210	1,030	+	1.13	135.5	
4/30	130	1,037	+	1.00	.....	A. B. C. diuretic.
5/1	200	1,026	—	1.05	136.5	
5/2	680	1,013	—	1.83	.....	Levulose test negative.
5/3	520	1,017	0	1.87	136.5	Restricted chlorids (about 5 gm. daily).
5/4	310	1,024	—	1.53	.....	Paracentesis, 6,950 c.c.
5/5	270	1,030	—	1.83	.....	Theocin gr. v, t. i. d.
5/6	370	1,033	+	2.45	121.5	
5/7	300	1,030	+	1.98	.....	
5/8	240	1,030	+	1.80	121.0	
5/9	210	1,029	+	1.16	119.5	Theocin stopped.
5/10	290	1,026	+	1.27	121.0	NaCl gm. 10 p. o.
5/11	330	1,024	+	1.25	123.7	
5/12	270	1,030	+	0.93	125.0	
5/13	180	1,027	—	0.57	127.0	Salt-free diet. A. B. C. diuretic stopped. Paracentesis, 6,700 c.c. (NaCl .637 per cent. = 42.6 gm.).
5/14	220	1,032	—	0.78	114.5	
5/15	310	1,026	+	0.90	114.0	
5/16	270	1,029	+	0.69	114.0	
5/17	280	1,026	+	0.81	116.7	
5/18	440	1,019	+	0.68	.....	Low chlorid diet. Fluids increased.
5/19	820	1,019	+	0.95	116.7	
5/20	750	1,016	+	1.52	115.5	Vomiting.
5/21	370	1,024	+	1.04	114.8	Vomiting.
5/22	310	1,030	+	1.04	.....	Vomiting.
5/23	260	1,032	+	0.59	.....	Vomiting.
5/24	470	1,028	+	0.94	.....	
5/25	.....	.....	..	.....	.....	Died.

* In this column + indicates acid reaction; —, alkaline reaction; 0, neutral.

The pathologic diagnosis, as a result of the post-mortem examination, was: Cirrhosis of the liver—atrophic; chronic aortic endarteritis; cardiac hypertrophy; general arterial sclerosis; chronic interstitial pancreatitis; chronic interstitial splenitis.

The kidneys are not mentioned, but that there was a slight change was shown by the note that "the right and left kidneys weigh respectively 120 and 130 gm.; capsule strips easily; cut surface opaque; pyramids not well-formed; glomeruli visible; microscope shows a few hyaline glomeruli, but little increase in stroma."

We have, therefore, in a case with slight evidence of kidney-change by the usual clinical and post-mortem findings, several noteworthy features. The urine was diminished throughout, the largest quantity being 1,120

c.c., and the smallest 130 c.c., an average daily excretion of 403 c.c., or less than one-third the normal average. Regardless of the intake of salt, which varied from 3 gm. to 15 gm. per day, the excretion was never above 3 gm. per day, average of 1.42 gm. During the nine days from April 25 to May 4, the salt intake averaged a little over 7 gm. per day, or approximately 65 gm. for the period. During the same period 14 gm. were excreted by the kidneys and, at the end of the period, 44.4 gm. were removed from the body in 6,950 c.c. of ascitic fluid. The balance may be shown as follows:

NaCl intake		65.0 gm. (approx.)
Excretion by kidneys	14.0 gm.	
Content of ascitic fluid	44.4 gm.	= 58.4 gm.
Difference, excretion in feces and sweat		= 6.6 gm.

During the period May 4 to May 13, the salt in the diet was approximately 52 gm., to which should be added the 10 gm. given on May 10, making a total of 63 gm. Following the introduction of 10 gm. of salt there was a rapid increase in body-weight amounting to 2.7 pounds, approximating the amount of water required to hold 10 gm. of salt in solution in the percentage recovered from the ascitic fluid three days later. That is, 10 gm.÷0.637 gm. (the amount in each 100 c.c. ascitic fluid)=1,570 c.c.=3.4 + pounds.

		Gm.
Salt intake in diet		52.0
Salt given on May 10		10.0
Excreted in urine	13.2	62.0
Recovered from ascitic fluid	42.7	
		= 55.9
Excretion in feces and sweat		6.1

It may be noted that in this case, in which hepatic cirrhosis was proved at autopsy, the result of the levulose test was negative.

SUMMARY

In this case of alcoholic cirrhosis of the liver, with but slight involvement of the kidneys (confirmed by autopsy), the following points were noted:

1. There was a constant and continuous decrease in the elimination of water and chlorids.
2. Diuretics had only a slight and transitory effect on elimination.
3. A dose of 10 gm. of salt was followed by a retention of water, and a corresponding increase of body-weight.
4. The retention of salt appears, in some cases, to be the primary process.
5. A diet of low salt content may be of service in prolonging the ascitic stage of cirrhosis, thus allowing time for the desired collateral circulation.

157 West Seventy-Ninth Street.

Albuminized Bread.—Serum obtained by straining the coagulated blood of slaughtered cattle is added to rye bread; 10 pounds of rye flour are mixed with 5 pounds of the serum and ½ pound yeast. When the dough has risen, 6 pounds of rye flour and 6 pounds of serum are added. These directions are given in the *Jour. Army Med. Corps*, 1912, xviii, 234. They are taken from a Russian article on an "iron ration" for soldiers, a ration to be carried only for emergencies. The bread is to be dried and with it are to be carried tea, sugar and bouillon cubes. This albuminized bread has been found to supply the extra proteid in a satisfactory form. The taste does not differ from that of ordinary rye bread. Wheat bread made with it has a pinkish tinge, which is not noticeable with darker flour. It is stated that 800 gm. of the dried albuminized bread or zwieback represent 221 gm. of proteid and 576 gm. of non-nitrogenous food material.

THE EFFECT OF INTERCURRENT PNEUMONIC COMPLICATIONS ON THE COURSE OF CHRONIC PULMONARY TUBERCULOSIS

J. W. PETTIT, M.D.
Medical Director, Ottawa Tent Colony
OTTAWA, ILL.

Pulmonary tuberculosis presents a varied picture. Some cases are continuously afebrile, others run a low-grade temperature without an afternoon rise above 99.6 for months, others run a low-grade temperature as a rule, but are subject to acute exacerbations, while others run a continuously high fever of the intermittent type and progress rapidly to a fatal termination.

We are in the habit of looking on the afebrile cases with low-grade fever as the most favorable and the cases showing acute exacerbations as unstable, uncertain and unfavorable. In general this assumption is correct, and is borne out by clinical observation, but there is a certain group of these cases in the acute exacerbation class that are not unfavorable, and the acute exacerbation seems to have a profound influence on the tuberculous process. These cases are those showing an intercurrent or superimposed pneumonic infection of a rather severe character during the course of the chronic tuberculous disease.

Ordinarily, acute tuberculous pneumonia is looked on as unfavorable and cases with acute bronchopneumonia show a tendency toward disintegration rather than calcification, but not rarely the acute pneumonic process set up by a mixed infection heals (Ophüls).

Osler considers tuberculous pneumonia — the acute pneumonia due to the tubercle bacillus alone (the so-called caseating pneumonia)—as unfavorable, but it is not this type of tuberculous pneumonia that I wish to discuss, but rather the acute pneumonia (presumably of pyogenic origin) superimposed on a chronic ulcerative tuberculous process. Coyon and Fiessinger report a case showing symptoms of acute tuberculous pleurisy that later became torpid with encapsulated pneumothorax. The effusion was evacuated occasionally and signs of secondary infection with the *Staphylococcus aureus* were discovered in a few months. "This transformed the tuberculous process and a cure followed."

These cases may run the usual course of chronic ulcerative tuberculosis for months—low-grade afternoon fever, rapid pulse, moderate amount of expectoration—and remain practically stationary. A sudden rise of temperature may occur, ushered in by a sharp chill, pain in the side, dyspnea and the other signs of an acute pneumonia may develop. The patient, his friends and physician become alarmed and the condition of the patient is believed to be very grave. After from twenty-eight to thirty days, however, the fever subsides, the pain and dyspnea disappear and while the patient has lost weight and is weakened by the fever, an examination of the lungs does not show an advance of the tuberculous process as might be expected, but the pulmonary findings are much improved.

Ordinarily an intercurrent pneumonia or pleurisy with effusion in pulmonary tuberculosis is considered unfavorable, but this observation I have made in a number of cases, and at present, instead of looking on the condition as unfavorable, if it is not too severe, I am inclined to consider it favorable, and regard the prognosis after such an attack as good.

Out of 1,200 cases admitted to the Ottawa Tent Colony in the past seven years, at least twelve were of this type. Of this number eight patients are cured and self-supporting (66⅔ per cent), two are still under treatment, one died during the attack, and one died subsequently from other causes. The prognosis in the cases of the two patients still under treatment is extremely good—much better than before the pneumonic attack—but leaving these two cases out of the consideration, the results achieved in the remaining ten are very striking—success in 90 per cent. These cases are all in the advanced class and in this type of case 35-40 per cent. cures is considered a good average. These results lead me to believe that those acute intercurrent infections are not as detrimental as is generally believed, but on the contrary are favorable.

It is unnecessary to give histories of all the cases observed, but examples of the different types may be of interest.

CASE 1.—H. R. (advanced case), had been under treatment prior to pneumonic attack for four and one-half months. Maximum temperature was from normal to 100. Pulse ranged from 100 to 120. Appetite and digestion, as a rule, were good. Weight was 126 pounds. At onset of pneumonic attack temperature suddenly rose from 99 to 104.2 in twenty-four hours and remained above 103 for seven days, above 101 for fourteen days, and on the twenty-eighth day dropped to normal. For the succeeding seventeen days temperature varied from 98.8 to 100, with an average of 99.6. For the next sixty days maximum temperature was not above 99. Pulse average about 100. Patient lost 11 pounds during attack, but gained 16 pounds in the next sixty days; made a good recovery and is now in good health, four and a half years after discharge. Diagnosis was based on clinical symptoms.

CASE 2.—J. D. (moderately advanced case), had for two months after admission maximum temperature 100.2, with an average daily maximum of 99.2. Pulse ranged from 85 to 100. Onset of pneumonic complication was sudden, temperature rising within twenty-four hours to 103.8, when patient had two hemorrhages aggregating 6 ounces. In the three succeeding days he had four hemorrhages aggregating about sixteen ounces. On the tenth day temperature rose to 104.3 and remained above 104 until the twenty-second day, when patient died from exhaustion. Diagnosis was based on clinical findings.

CASE 3.—F. E. (advanced case), gave history of recent acute pneumonia with marked consolidation which had not cleared up. Maximum daily temperature from time of admission to onset of pneumonic complication ranged from normal to 99.8. Pulse was 95 to 122. In eight months consolidated area showed marked improvement. Patient's general condition was good. He gained seventeen pounds, then developed pneumonia, temperature rising to 102.4 within twenty-four hours. Highest temperature during attack was 103, which was on the ninth and eleventh days, gradually but irregularly subsiding. On the twenty-second day temperature was normal. For the succeeding forty-eight days temperature did not range above 99.4, with an average of 99. Pulse was 80 to 92. Patient returned to his home. He was making steady improvement when he suddenly developed some brain trouble which was not diagnosed, but from the history as I obtained it, was probably an abscess of the brain. Diagnosis was based on clinical symptoms, pneumococci in sputum, and recovery of the pneumococcus from the blood.

CASE 4.—L. K. (advanced case), had been under treatment four months prior to the pneumonic attack, during which time he was making satisfactory progress. Maximum daily temperature was 98.8 to 100.2; average 99.4. Within twenty-four hours after the onset of the pneumonic attack the temperature rose to 102. On the seventh day it reached 104.2, and gradually subsiding, touched normal on the thirtieth day. The patient remained under treatment for two and a half months longer, during which time the maximum temperature was 99.4, with an average of about 99. The temperature was normal two weeks prior to discharge. Patient lost six pounds in weight during attack, which was rapidly regained. Patient now living, after two years, and reported as in good health. Diagnosis was based on clinical symptoms and recovery of pneumococcus from sputum and blood.

CASE 5.—W. C. (moderately advanced case), had on admission maximum daily temperature averaging 99.4. Pulse ranged from 98 to 114. Two weeks after admission she suddenly developed pneumonia. Temperature rose within twenty-four hours from 99.2 to 104.1; second day 105. Pulse 132. Temperature gradually subsided, touching normal on the twenty-sixth day. Patient remained under further treatment for four and a half months, during which time the maximum temperature was 99.3, and for two months prior to discharge, temperature was normal. Patient has been discharged for three months, during which time improvement has been steady. Diagnosis was based on clinical symptoms and recovery of pneumococcus from the blood and sputum.

CASE 6.—A. C. (advanced case), weighed on entrance 103; normal 115. Appetite and digestion were poor. Temperature was very irregular, ranging from normal to 103.6, at no time remaining above 100 for more than two or three days consecutively. Four months and a half prior to the onset of the pneumonic complication temperature did not range above 100.2. Appetite and digestion were still poor. Patient alternately gained and lost in weight with net gain of only one pound. With the onset of the pneumonic complication the temperature rose within thirty hours to 103, and reached the highest point on the eleventh day. It began to subside on the sixteenth and touched the normal on the thirtieth, since which time the temperature has not been above 100.2. Appetite and digestion are very much improved. Patient gained 11 pounds in the past two months, and general condition is very much better in every respect than at any time since admission. Patient is still under treatment. Diagnosis is based on clinical symptoms and recovery of the pneumococcus from the blood and sputum.

CASE 7.—F. M. (advanced case), has had present illness for three years, and is still under treatment. Weight on entrance 136 pounds; normal 142. Maximum daily temperature ranged from time of entrance to onset of pneumonia from 98.6 to 100.2. Six weeks after admission temperature suddenly rose to 102.2. On the sixteenth day after attack, 104.6. Gradually subsided and on the thirtieth day dropped to normal, since which time it has not been above 99.4, and is now normal. Patient lost eight and a half pounds during pneumonic attack, which he regained within three weeks and now weighs 151 pounds. Diagnosis based on clinical symptoms.

Lung findings in all these cases were found much improved on the first examination after pneumonic symptoms had subsided.

There is a preponderance of evidence at hand that the immunity in pneumonia is a phagocytic one; the total number of circulating leukocytes is increased. There is also a local accumulation of leukocytes in the lung and it has been demonstrated by Metchnikoff, Opie and others, that these leukocytes contain various ferments that kill and digest bacteria. A plausible explanation of the above phenomenon is that the intercurrent pneumonic infection causes an accumulation of leukocytes in the lung and these leukocytes not only overcome the pneumonic infection, but in their zeal act on the tuberculous infection also and after recovery from a rather hard siege the patient, instead of being in worse condition than before, was found benefited.

The effect of acute intercurrent pyogenic infection on chronic tuberculosis has been observed in other parts of the body. The effect of erysipelas on chronic, indolent tuberculous ulcers has been repeatedly noted. If tuberculous ulcers of the skin heal rapidly after an inter-

current attack of erysipelas, is it not reasonable to assume that a similar reaction can occur in the lung?

These observations lead me to the conclusion that intercurrent pneumonia during the course of pulmonary tuberculosis is not unfavorable, but appears to exert a favorable influence and in the cases cited appears to have been an important factor in the production of a cure.

If an accumulation of leukocytes could be induced artificially in a tuberculous focus by the use of some positively chemotactic substance—not necessarily bacterial—this artificially produced accumulation of leukocytes might be of value in hastening the "cure" of the tuberculous process. Animal experimentation along this line, I believe, would be exceedingly productive.

CASE OF ACUTE MERCURIAL POISONING FOLLOWED BY GENERAL NECROSIS OF MAXILLARY BONES AND PURULENT OTITIS MEDIA

M. HERZSTEIN, M.D., AND A. BAER, D.D.S., M.D.
SAN FRANCISCO

On Dec. 3, 1910, Mrs. E., aged 28, drank a solution containing six 7½-grain tablets of mercuric chlorid. She vomited freely within five minutes; her stomach was washed at the end of thirty minutes, and in the interim she drank the whites of half a dozen eggs and two glasses of sweet oil. At the end of an hour she became unconscious and was removed to the hospital. Urine, drawn by catheter for the first time at the end of sixty-two hours, was bloody, four ounces in all. Patient was unable to take nourishment except by rectum, as everything taken by mouth was immediately expelled by vomiting.

A diffuse papular rash appeared over the entire surface of the body at the end of twenty-four hours; the left heart was dilated and sounds were weak; pulse, 120, weak, thready and of low tension; liver enlarged to about three fingers' breadth beneath the free margin of the ribs; examination of urine showed presence of albumin (0.3 per cent.), large quantity of pus, large numbers of hyalin and granular casts and renal epithelium. The patient's ankles, knees, hips and elbows became sore and stiff, and by Jan. 1, 1911, she had lost 35 pounds.

By the second day her teeth had turned black, and were extremely loose, while from the sockets there exuded a free discharge of foul-smelling pus. Breath was intensely offensive; the saliva fairly ran from her mouth in a stream. She could only open her mouth about three-fourths of an inch and was unable to close it because of the extreme soreness of her mouth and teeth.

The entire oral mucous membrane, but especially that over the alveolar processes, was covered by a mass of large vesicles, which on bursting discharged a thick hematoserous fluid. As the condition (i. e., mercurial stomatitis) progressed, small areas of necrosed bone were exposed and showed over the entire alveolar process, first appearing in the regions between the teeth themselves, and then spreading laterally in all directions. The teeth finally became so loose that, during the first month eight lower teeth, the right bicuspids and molars and the left bicuspids and first molar, and four upper teeth, the right and left second bicuspids and first molars, either dropped out or were taken out by the patient herself, through fear of swallowing them. The remaining teeth, although also very loose at this time, subsequently tightened in their sockets and at the present time are firm and normal. A large abscess mass formed externally on the left side beneath the bicuspids, and was opened and drained into the mouth.

Coincident with the development of this condition in the mouth, there occurred an acute purulent otitis media, with an associated intense pain over the mastoid region and back up over the neck and head. The eardrum ruptured in the upper posterior quadrant and there was a free discharge of pus. There was complete loss of hearing on the left side.

By Jan. 1, 1911, the alveolar processes of the upper and lower jaws had necrosed and were completely denuded of gum tissue on their articulating surface.

Patient was operated on Feb. 1, 1911, and eighteen sequestra were removed from the exposed alveolar processes and from between the necks of the teeth which had not been lost. The largest pieces removed measured 1¾ and ¾ inches in length. At this time the abscess mass beneath the left maxilla, having continued to increase in spite of being drained into the mouth, was opened externally on the face, and was drained daily by means of through-and-through irrigations and kept open by means of a rubber tube and gauze packs. With the exception of this one area, the mouth had entirely healed by February 15. This sinus continued to discharge about one dram of pus with each daily irrigation, being reduced to but a few drops at the end of two months, i. e., April 15. At this time a large sequestrum was removed through the external face incision and by May 1, the patient's mouth was entirely clean and healthy.

The condition in the ear was successfully treated by Dr. W. S. Franklin without operation. Discharge has entirely stopped and the patient's hearing on the left side has been restored to about one-third normal.

By means of tonics and an out-door life she has regained about 20 pounds, but still suffers from extreme anemia, due to a very weak heart. She also has a chronic parenchymatous nephritis.

This case is simply an aggravated form of a condition which is seen in the mouth during the normal administration of mercury, as it is given in the treatment of syphilis, or which quite frequently results from an overdose of calomel. The fact that mercury is, to a very large extent, excreted through the mucous membrane of the mouth, probably accounts for the peculiar susceptibility of the oral tissue to overdoses of this drug. In ordinary salivation, we get the beginning of a mercurial stomatitis and a mercurial necrosis of the alveolar processes, which accounts for the gradual destruction of the bone around the teeth and which, if allowed to continue, would ultimately result in the loss of the teeth owing to the complete softening of the alveolar processes supporting them, and the cementum of the teeth, which is typical bony tissue, histologically, takes part in the same destructive process and hastens the tendency toward tooth exfoliation.

There are a great many cases on record in which this latter condition has occurred, but I am unable to find any in which such extensive destruction as took place in the present case has been reported. The unique character of the case is perhaps due to the fact that the condition usually ends fatally, and it is only by the rarest good fortune that this patient's recovery, owing to prompt medical attention and to her own remarkable vitality and resistance, has enabled us to witness and to treat the interesting condition which we are able to report in this paper.

177 Post Street.

The Tongue of the Wise Useth Knowledge Aright.—"Some physicians are so conscientious—and so tactless—that they think they must tell patients the whole truth when they believe they cannot recover, instead of giving them the benefit of the doubt, for every physician knows that nearly always there is a doubt which way the case will turn. Cheerful encouragement has saved many a life by helping it to pass a crisis favorably, when the actual truth might have killed the patient or reduced his rallying powers to the danger-point."—O. S. Marden.

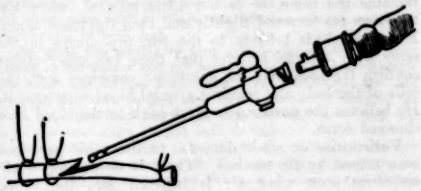
V. 58
1912

INTRAVENOUS LOCAL ANESTHESIA *

CARROLL SMITH, M.D.
Instructor in Surgery, St. Louis University School of Medicine; Surgeon, Alexian Brothers' Hospital
ST. LOUIS

In searching for a method to avoid the difficulties of nerve-blocking anesthesia, Bier[1] developed the idea of *Venenanästhesie* which he reported at the thirty-seventh German Surgical Congress, in 1908. In 1909, he reported a series of 134 cases and gave in detail the technic of the method.[2]

The anesthetizing solution is injected into the veins, in a bloodless segment between two Esmarch bandages. The tissues in this segment become anesthetized almost at once. This is called the "direct anesthesia." After a short time the limb distal to the segment becomes anesthetized followed by motor paralysis. This is the "indirect anesthesia." The injected solution reaches the smallest vessels in all tissue, even to the bone-marrow. The veins swell as the injection proceeds, but the swelling soon disappears due to the rapid diffusion of the anesthetizing solution throughout the tissues. The whole thickness of the limb becomes anesthetic. The direct anesthesia is due to the action on the nerve-endings and smaller nerves within the segment, while the indirect anesthesia is due to the action on the nerve-trunks. A



Bier's special cannula showing method of attachment.

0.5 per cent. solution of novocain in sterile physiologic saline solution has been found to be the most satisfactory. It is not necessary to boil the solution after adding the novocain but if desired it may be heated for a short time on a water bath. Suprarenal preparations are not used. They do not prolong the anesthesia and they may hinder good results by contracting the smaller vessels.

Besides the usual instruments used in exposing a vein, the following are necessary: three Esmarch bandages, one 6 meters, and two 3.5 meters long; a 100 c.c. Janet type syringe; and Bier's special cannulas (1.5 mm. in diameter for children; 1.75 or 2 mm. for adults). The 2 mm. cannula is large enough for the dilated saphenous vein in the varicose veins. The cannula (see illustration) is grooved at the distal end in order to catch the ligature which is tied about the vein. The other end is provided with a stop-cock and fits over a conical connection from which a pin projects to catch in a slit on the cannula. This connection in turn is attached to the syringe by a strong rubber tube such as a Nélaton catheter. This construction is important as much force is often necessary to accomplish the injection.

The Esmarch bandages are boiled and kept in a 3 per cent. phenol (carbolic acid) solution. The syringe, with the plunger and attachments removed, is boiled in water or saline solution. If boiled in a soda solution the parts must be rinsed in water or saline, because the soda irritates the tissues and may impair the action of the anesthetic.

It is best to find a suitable vein and mark its location by a knife-scratch before preparing the extremity. When the method was first introduced only the larger veins were used, but any vein which will admit the cannula gives just as good results. The entire extremity should be made aseptic because the whole limb frequently must be handled in applying the elastic bandages.

For an operation at the elbow the following technic is employed: After marking the position of the vein, the hand, arm and forearm are asepticized. The longer Esmarch bandage is tightly wrapped about the arm from the finger-tips to within about 10 cm. above the elbow-joint. Beginning at this place, one of the shorter rubber bandages is wrapped several times about the arm overlapping the first or expulsion bandage and extended 8 or 10 cm. up the arm. The expulsion bandage is now removed and the second short bandage is firmly bound around the forearm at about 10 cm. below the joint. Between the two bandages is the bloodless segment which should not be under 10 cm. or over 30 cm. in extent. Under Schleich infiltration anesthesia, a transverse cut is made over the marked vein as near the proximal bandage as possible, for the upper part of the segment may remain sensitive if the vein is opened too low. The vein is exposed, cut tributaries are tied, and three ligatures are placed loosely about the exposed vessel. With the first ligature the vein is ligated high up, a slit is now made in the vein and the cannula is introduced distally well into the lumen. The second ligature is tied tightly about the vein over the cannula, which is slowly withdrawn until the ligature catches the groove. The novocain solution, at body temperature, is injected distally into the vein, as the best anesthesia of the skin is obtained by injecting in this direction. Some force is necessary to fill the veins properly. Only twice in 134 cases reported by Bier have the valves of the veins hindered the entrance of the solution, and in both cases the obstruction was overcome by using more force in the injection without any injury to the valves. Leakage of the solution at the cannula or at cut tributaries of the vein must be avoided. The swelling of the subcutaneous veins shows that the solution is entering properly. After the injection the vein is ligated beyond the cut, with the third ligature, the cannula is removed and the wound closed. In amputations and resections the stop-cock may be closed and the cannula left in place so that saline solution may be injected later, through the veins, in order to show the location of unligated blood-vessels.

The operation under the direct anesthesia within the segment may be begun at once, as a rule. Sometimes the anesthesia of the skin on the side opposite the injection area is delayed — at most, five minutes; however, the skin near the upper bandage may continue sensitive. If direct anesthesia is not complete within five minutes some technical error is responsible (Bier[3]).

In about six to ten minutes the forearm distal to the segment is anesthetized, and very soon thereafter (one to two minutes) motor paralysis appears. This is the

* Read before the St. Louis Medical Society, Oct. 7, 1911.
* For other articles on this subject see THE JOURNAL A. M. A., Sept. 19, 1908, p. 1040, and May 1, 1909, p. 1466.

1. Bier: Ueber einen neuen Weg Localanästhesie an den Gliedmassen zu erzeugen, Arch. f. klin. Chir., 1908, lxxxvi, No. 4.
2. Bier: Ueber Venenanästhesie, Berl. klin. Wchnschr., 1909, No. 11.
3. Bier: On Local Anesthesia, with Special Reference to Vein Anesthesia, Edinburgh Med. Jour., New Series, 1910, v, No. 2.

indirect anesthesia. Motor paralysis serves as an indication that sensation is lost. When this indirect anesthesia appears, the distal bandage may be removed, but not the proximal. In case the proximal bandage is painful, another bandage may be placed just below it on the anesthetized area and the first one removed; or a subcutaneous injection of 20 c.c. of 0.5 per cent. novocain containing two drops of suprarenin may be made around the arm just above the bandage.

The same technic may be used on the leg, but here the indirect anesthesia usually comes on later, sometimes being delayed as long as twenty minutes. In the foot and hand the expulsion bandage is wrapped up to a position just above the ankle or the wrist, the proximal bandage applied, and the expulsion bandage removed. No distal bandage is necessary. About 60 c.c. of the solution is injected as described above. The direct anesthesia comes on almost at once to the whole extremity distal to the bandage. When a vein cannot be found near the hand it is necessary to use indirect anesthesia, employing the median or cephalic vein in a bloodless segment higher up. In cases requiring long incisions, indirect anesthesia should be used.

The above methods are not applicable when the parts are too sensitive to bear the elastic pressure. In such cases the expulsion bandage may be begun well above the tender or inflamed area and extended upward for 20 to 40 cm. The proximal bandage is applied at the upper limit of this bandage and the first bandage is unwrapped over a sufficient area to allow a bloodless segment for the injection, the first turns of the expulsion bandage being left to serve as the distal bandage. The operation may be carried out in the inflamed area under the indirect anesthesia after about six to ten minutes. Direct anesthesia may be employed in such cases as follows: The extremity is elevated to lessen the blood content. Esmarch bandages are applied above and below the tender area. A vein is opened near the proximal bandage and allowed to bleed, after which the anesthetizing solution is injected.

In a child (not under 10 years of age) about 30 to 50 c.c. of the solution may be used for the arm and 40 to 60 c.c. for the leg. As a rule, not over 70 c.c. should be employed. In an adult 50 to 80 c.c. may be used for the arm and from 80 to 100 c.c. or even 150 c.c. for the leg.

The anesthesia remains as long as the proximal constrictor is left in place. On the removal of this bandage the anesthesia rapidly comes to an end (two and one-half to seven minutes, according to Bier[3]), consequently it is imperative that the operation be completed before the bandage is removed. Neither the duration of the operation nor the use of suprarenal preparations has any effect on the rapidity of the return of motion and sensation.

The anesthesia is always good if the technic is good. According to Härtel,[4] the causes of failure are usually due to (1) underdosing (5 per cent.), (2) equipment disturbance, (3) varices (often only one side being anesthetized, which is overcome by using more solution), (4) incomplete emptying of the veins, or (5) the use of suprarenal preparations. Disturbances of indirect anesthesia are usually due to the employment of a bloodless segment which is too small, or a loose distal bandage which allows the solution to diffuse to the whole distal part of the extremity.

4. Härtel: Die Technik der Venenanästhesie, Wien. med. Wchnschr., 1909, No. 35

Apparently the danger of poisoning may be disregarded. Bier[2] reports two cases in which he employed the anesthesia, and the patients became anxious and vomited. The pulse became rapid and small. Both patients recovered speedily. Hitzrot[5] reports a patient who had a chill and was nauseated three hours after the bandage was removed. A hypodermic injection of 1/8 grain of morphin relieved the symptoms. Page and McDonald[6] report that they have frequently noticed a fast and irregular pulse on the second or third day after the operation. In the earlier work the danger of intoxication was guarded against by two means; the solution was let into the general circulation in two stages by loosening the Esmarch bandages for a short time and then tightening them again, or the veins were washed out with saline solution. These procedures may be dispensed with as such precautions are not necessary.

According to Bier,[2] the anesthetic goes speedily through the vein wall and a great part of it is bound in the tissues, especially the nerve tissues, returning to the circulation gradually. He has shown that more than ten times the fatal dose of cocain may be retained for one hour in the veins of a bloodless segment, in a rabbit, without toxic symptoms on removal of the bandages. Härtel[4] has shown that the anesthesia remains even after washing out the veins with saline. Furthermore, he has observed that the anesthesia remains the same, or is but little affected, when the bandages are loosened slightly and then tightened again. Motor paralysis behaves to the two procedures in the same way. Härtel believes that these two observations confirm the idea that the anesthetic combines with the cells of the body and requires arterial blood to release it. He believes the novocain is given back to the blood in a changed form.

Varicosities or other damages to the veins have not been caused by the method. There is no danger of air embolism even when air is injected into the veins. Motor paralysis may persist for a while, but eventually disappears.

The method may be used wherever an Esmarch bandage can be applied. It is especially useful in cases with heart and lung complications, which are bad general anesthesia risks. In Bier's clinic the method is preferred for the greater operations on the limbs. Diabetic and senile gangrene and arteriosclerosis seem to be the only general contra-indications. It is better not to use the method in children under 10 years of age, or in nervous people; not because of danger, but on account of the nervous element. Acute and chronic infections are not contra-indications. The method is not preferred where the Schleich, Hackenbruch, or nerve-blocking methods are satisfactory.

311 Humboldt Building.

5. Hitzrot: Intravenous Local Anesthesia, Ann. Surg., 1909, 1, 782.

6. Page and McDonald: A Report of Some Cases of Venous Anesthesia, Lancet, Lond., Oct. 16, 1909, p. 1135.

Limits of Heredity.—Whatever disease or infection is conveyed to the embryo after the fusion of the parental germs cannot be regarded as inherited. Disease transmitted through the fetal cord, as in variola; syphilis conveyed to the embryo *in utero* by the father, the mother escaping the infection; these and many more instances of intra-uterine infection can in no sense be regarded as inherited, no more so than that which develops later in the child as it lies in its crib or mingles with its playmates. Heredity is bound up within the walls of the spermatozoon and the ovum.—Sweeney in *New York Medical Journal.*

A CASE OF STATUS EPILEPTICUS WITH AN UNUSUALLY LARGE NUMBER OF CONVULSIONS

S. A. SMITH, M.D.
LINCOLN, ILL.

Patient.—Delia N., a girl, white, aged 8½, was admitted to the Lincoln State School and Colony Jan. 29, 1912. Family history shows both mother and father and grandparents on both sides to be living and well. Brothers and sisters of the patient are living and well. She was the fourth born of five children, weighing 9 pounds at birth, full term. It was noted at birth that she had a nevus covering all of the right side of the body and a small blotch on the left thigh. It was also said that she had had a convulsion at the age of 1 year, the character of which is not known. No history could be obtained as to the exact time when epileptic seizures commenced.

Examination.—The patient was a well-nourished child weighing about 58 pounds with a large reddish-purple discoloration of the skin on the entire right side with a small amount on the left thigh on its upper third. There was no deformity of the osseous structure. There were several scars on the child which she no doubt received during convulsions. There was a slight myocarditis and some tympanites. Eye reflexes were unattainable on account of the constant tossing and restlessness of the child during the examination. The patellar reflexes were exaggerated on both sides, somewhat more on the left. Tendo Achillis reflexes were much diminished. The Babinski sign was absent on both sides. No definite information could be obtained, but it seemed as though the hearing and sight of the child were faulty. Gait was affected due to a talipes equinovarus of both feet.

The child was unable to feed and dress herself, was very untidy in her habits and not attentive to the calls of Nature. She cried and fretted very much. The child's parents said that she had been subject to a varied number of seizures for some time but they had never kept any record, so they did not know how many she did have at times.

Clinical History.—She suffered one convulsion on the day of her admittance, January 29; the next day six, and five on the 31st. In the morning of February 1, eleven, and during the night forty-three. On February 2, there were 461, February 3 there were 573, on February 4 there were 403, on February 5, 158, the child dying at 10:15 p. m. The attacks were all of the grand-mal type, the child lying in a stupor between convulsions. She would respond to stimulation of the pain sense as on pricking the ear she would turn her head slightly, or on pinching the arm she would try to move it away. Bromids were administered from the time of her admission in doses of 15 gr. of the triple bromids every four hours. On the afternoon of February 2, she was anesthetized three times with chloroform. During the surgical anesthesia she showed no convulsion, but as soon as the first evidence of the pupillary reaction occurred she would immediately suffer a terrific convulsion much worse than those previous. Morphin in 1/12 gr. doses hypodermically gave no results. Patient was unable to take nourishment at any time. She had no involuntary passages of either urine or feces and it was necessary to catheterize her on the 3d, which was twenty-four hours after her severe seizures started. All other efforts proved of no avail to induce urination. The temperature rose to 102 F. during the afternoon of February 2. At 8 p. m., it was 104.8 F. From then on it showed marked fluctuations until the evening of February 3, when it returned to normal and stayed practically at normal, going to 100.6 a few hours before death. During seizures there would be marked rotation of the head to the right side with a nystagmus of both eyes with the long jerk toward the right side. The pupils would dilate markedly. She would perspire profusely, especially after a severe convulsion. On February 5 continuous normal saline per rectum was started and she absorbed 1 liter in four hours, after which she had a voluntary urination. Her urine examination on admission showed an occasional hyaline cast with no albumin. Catherized specimen during the convulsions showed twenty-four hour collection of only 6 ounces with an enormous number of hyaline casts and a large amount of albumin. A blood examination on February 4 showed normal number of red cells per cubic millimeter, large leukocytosis of 41,400 per c.c. The hemoglobin was 85 per cent. There was nothing unusual in the appearance of the red cells. A differential count of 100 white cells gave the polymorphonuclear neutrophils 85 per cent., the greater percentage of which were evidently young cells, being about 10 microns in diameter and the granules taking a deep stain, whereas the remaining cells were of normal size and staining much paler. The young cells averaged about five nuclei each, whereas the older cells averaged about two. Blood coagulated rapidly.

This case holds interest for the great number of grand-mal seizures that may occur in a case of status epilepticus. Spratling refers to LeRoy's case of 488 grand-mal seizures in twenty-four hours and to another case showing 1,000 seizures in three days, and also refers to cases ranging from 1,400 to 3,000 seizures ranging over a period of three weeks or more, which, he says, is too long a period for status epilepticus to persist, the average time being from twelve hours to three days.

My case gives a total of 1,649 grand-mal seizures in 4½ days, with the largest number for any one twenty-four hours being 573 convulsions.

I wish to thank Dr. H. G. Hardt, Superintendent of the Lincoln State School and Colony, for his kindness in permitting me to report this case.

EPITHELIOMA OF THE TONGUE

WITH NO RECURRENCE NINE YEARS AFTER CLINICAL CURE WITH THE X-RAY

MARTIN F. ENGMAN, M.D.
Barnard Free Skin and Cancer Hospital
ST. LOUIS

This case is of interest as it had every clinical symptom of an epithelioma of the tongue. The clinical diagnosis was confirmed by several of the leading surgeons and dermatologists in this city, and in Chicago.

The patient appeared May 30, 1902, with a hard nodule on the left side of the tongue, situated in the anterior third. The nodule was raised about an eighth of an inch above the surface of the tongue, and extended into the substance for some distance. To the touch, it was hard, indurated, and resistant. The center of the nodule was beginning to ulcerate, and there was some pain, especially when it came in contact with a hard substance. It had existed for several months, having slowly increased in size.

The infiltration, situation and peculiar character of the lesion forced one to the diagnosis of epithelioma. No specimen was taken for microscopic examination, on account of the irritation that comes from such a course, and the possible opening of vessels for metastasis.

The patient refused operation, and on account of the location of the lesion in the anterior portion of the tongue, it was decided to attempt its destruction with the *x*-ray. The following technic was employed: The tongue was drawn out and held by the patient's right hand, which made it very accessible to treatment. An opening, larger than the nodule, was cut in a piece of lead foil, which was so placed that it covered the patient's face and hands, leaving exposed the involved surface. The tube was then placed in gradually decreasing distances ranging from 5 to 2 inches of the nodule. Thirty exposures were given in all. The radiation was continued daily for from ten to fifteen minutes, until the mucous membrane was whitened, and reaction was obtained. This was allowed to subside, when another series of active radiation was begun. The last series was continued until the tumor presented a marked reaction, and all of the mucous membrane exposed was whitened.

In two weeks after the last series, the whole area became very much inflamed and painful, and continued so for a week, when a slough was formed, including the part exposed to the radiations. This, according to the patient, came away *en masse*, as dead, necrotic tissue, leaving a healthy-looking, granulated surface, which healed in a few weeks. After the last series of exposures, during the acute, inflammatory period and sloughing, including the healing of the granulated surface, the patient was at his cottage in Atlantic City; therefore I did not see him until he returned in the fall, at which time the tongue had entirely recovered. The site of the former nodule was marked by a smooth, perfectly flexible, superficial cicatrix; in other words, the whole area seemed almost normal, except on a very critical examination.

I have seen the patient many times during the last nine years, and at present the tongue seems absolutely well, the site of the former lesion being marked by a cicatricial line. To all clinical appearances, the diagnosis was that of epithelioma, although, as stated above, it was thought wise not to confirm this by the excision of a piece for microscopic examination, but I am absolutely convinced that the diagnosis of epithelioma was the proper one.

Although I have had such a favorable result in this case, I certainly would not recommend the *x*-ray as a usual method of treatment in epithelioma of the tongue.

In the case under discussion, the patient absolutely refused operation, and as the lesion was so favorably situated on the anterior portion of the tongue, near the edge, it seemed, under the circumstances, a favorable case for the rays. Therefore, on account of the nature of the lesion, rather prolonged exposures were given, at a short distance, until a very decided reaction was obtained in each series.

If one should undertake the treatment of such a case with the *x*-ray, I believe that the treatment should be as radical as possible. In other words, the exposures should be arranged so that a most decided reaction or burn would be produced.

412 Humboldt Building.

MALICIOUS AMPUTATION OF PENIS

R. L. MURDY, M.D., ABERDEEN, S. DAK.

History.—J. C., a well-developed and vigorous man aged 25, a railway fireman, a steady and industrious worker of fairly good habits but not strictly temperate, had married a woman much older than himself, who had twice before been unhappily married. This couple had not been living very happily together for some time; each occupied a separate part of the house, up to July 4, 1911, at which time there had been reconciliation and they had agreed to live together as man and wife; accordingly they had occupied a common apartment on the night of July 4. About 4:00 a. m., July 5, the man was aroused by a terrific pain and a frightful hemorrhage, and he found himself in the middle of the floor holding onto a more or less completely amputated penis, the stump and wound bleeding profusely. The major part of the organ was on the floor and the bed and the room were very bloody. He was alone, but cries for help brought a neighbor to his aid. The woman had taken a razor and with a sweeping cut had cut a circle around the root of the penis coming down and going wide into the skin and tissues of the scrotum turning under the penis some distance down on the scrotum crossing the median raphe and extending the incision up the other side of the scrotum to the starting-place, making an elliptical incision of the most minute precision. After this the skin had been drawn down and out until it had been detached from the root of the penis for about 1 inch, at which place it had been cut square across leaving that much of the penis without a sign of skin. The woman, after completing the amputation, rushed to a physician's residence and sent the doctor hurriedly to him, saying he was hurt.

First Operation.—The doctor put in some stitches in the skin, and a bandage around the stump to control the hemorrhage and sent the patient in to the hospital on the first train, where he arrived about 1:30 p. m. About 2 p. m. he was anesthetized and we started a rather unusual operation, which taxed all our ingenuity to devise a method by which we could save the stump and cover it with skin. We decided on a two-step operation. First, by sliding the skin of the scrotum and pubes, we were able to cover it by bringing the skin together over the dorsum making a linear row of sutures down to the urethra, where we put in interrupted sutures, suturing the skin to the mucosa. The corpora cavernosa were closed with a mattress suture to control hemorrhage. Drainage was provided for, and a catheter was fastened in place, and a sterile dressing applied.

The catheter remained in place for four or five days, at which time it was removed and left out as the patient had no further trouble about passing urine. The method of covering the denuded penis drew it down somewhat into the scrotum, and the patient was bothered very much with erections, which caused the skin to separate slightly over the dorsum and necessitated a few more sutures about the tenth day. The progress was uneventful after this, and the healing was fine. When the wound was healed we still had the penis more or less buried in the scrotum which drew down on the penis and up on the testicles, producing more or less disagreeable symptoms, which we were able to relieve quite satisfactorily at the second operation.

Second Operation.—August 9, two methods were considered for freeing the penis and making a skin cover to go around the organ. First, two lateral incisions with skin enough to close underneath or a transverse incision sutured longitudinally underneath the stump. A combination of the methods to furnish skin to close a slight defect at the meatus was worked out and proved quite satisfactory; however, this meant the stealing of much skin from the scrotum and the placing of all parts under some tension. The most difficult part of the second operation was freeing the penis from the scrotum, and the hemorrhage which seemed to come from the penoscrotal union underneath was not alarming but interfered with such delicate work.

Course.—The result would have been all that could have been expected except for a hematoma which upset part of our fine adjustment. Present condition shows a short penis, covered with skin, much wider and thicker than normal at the root; the patient says that it is enormously widened when in a state of erection, and that has been a very troublesome symptom. The patient consulted a noted surgeon in Chicago who advised him that he could graft on a penis, and that he would do it free of charge as a surgical curiosity. From the reputation of the surgeon consulted we do not doubt his ability to make good, providing the grafting material is forthcoming; and as no such material is available in these parts of the country, I have advised the patient to accept the generous offer of the Chicago specialist, but requested him to return and report on the results.

Patient insists that he was chloroformed in his sleep. I suspected overindulgence in alcoholics, which I have not been able to confirm.

Therapeutics

BLEEDERS

Whether a patient should be classed as a hemophiliac or as an accidental or temporary bleeder depends largely on the age of the patient, his personal and family history. There is a large hereditary influence in true hemophilia. Blood-vessel causes are probably rare in the true hemophiliac, and the tendency to bleed seems to be due to an abnormality in the blood-plasma. Such abnormality may be almost permanent, as occurs in hemophilia, or temporary, as in those who show a sudden tendency to bleed. The lack of ability of the blood to

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coagulate properly seems to be the basic cause of the profuse hemorrhage. It is quite possible, however, where the bleeding is oozing from mucous membranes, that a lack of tone in the blood-vessels may have something to do with capillary hemorrhage or oozing of blood. It is quite probable that certain abnormal conditions in the mucous membrane may be the local reason that the hemorrhage constantly recurs from this particular membrane only, which condition is of not infrequent occurrence. In bleeders, however, the trouble has been shown to be due to a prolonged coagulation period, because of the absence of some element in the blood-plasma, perhaps a slow development of the prothrombin, or a lack of development of prothrombin. It has not been shown just what the absent element in the blood is.

It has been proved that a prepared thrombin, or the blood-serum of animals, or serum from another human subject, added to the hemophiliac blood causes normal coagulation. Therefore, the coagulating ability is in the hemophiliac blood, but it does not seem to contain the proper impetus to coagulate.

It is known that the blood, properly to coagulate, needs calcium. For this reason it has been thought that the blood of bleeders was lacking in calcium. The administration of calcium has stopped bleeding, and does, temporarily at least, cure a good many bleeders, or those who have frequent hemorrhages; but nothing has acted so efficiently to cause hemophiliacs to cease to bleed as injections of blood-serum.

The first thing to consider in a bleeding patient is the momentary seriousness, and next the future, and, perhaps, a possible operation on a patient who is known to be a hemophiliac.

If there is circulatory weakness, whether from valvular lesion, or a weakened heart muscle, or a sluggish peripheral circulation from any cause, digitalis is good treatment. If there is a tendency to frequent hemorrhages or oozing of blood, either with the digitalis treatment or without it, when digitalis is not needed, a calcium salt is a most efficient treatment. It is a question of calcium, and not a question of any particular lime salt. In hemorrhage from the lungs due to tuberculosis, lime water is as efficient as any other preparation, and a tablespoonful of lime water, given in milk, three or four times a day, or even more frequently, is a most efficient aid in preventing these hemorrhages. The lime is also of advantage in aiding Nature's normal cure of the tuberculous lesion.

A more active lime salt is perhaps calcium lactate, and this is well administered as:

℞	Gm. or c.c.	
Calcii lactatis	4	gr.lxxij
Syrupi	25	or fl.℥i
Aquæ menthæ piperitæ, q. s.	ad 100	ad fl.℥iv

M. et sig.: A teaspoonful in water, three times a day, after meals.

If the patient is bleeding internally, as a hemoptysis, it is often sufficient to give him a hypodermatic injection of nitroglycerin. To give drugs to raise the blood-pressure when a hemorrhage is occurring which cannot be locally reached, and to apply pressure or other local prevention, would be bad treatment. The exception to this rule would be in a venous hemorrhage with a weak heart as the cause. In this instance digitalis may be of the greatest value. A venous hemorrhage from the lungs may not necessarily be helped by digitalis.

If there is mucous membrane oozing, and vasoconstrictors are indicated, one must think of such active vasoconstrictors as the active principle of suprarenal, the active principle of the pituitary body, ergot, atropin and perhaps strychnin. All of these drugs, to be effective, should be given hypodermatically. Suprarenal especially is useless as a vasoconstrictor when taken into the stomach.

Hemophiliac patients have been treated with suprarenal extract, in the belief that the suprarenal glands were insufficient. The success has not been great.

Thyroid disturbance can cause bleeding, or may prevent it. In the majority of instances, an increased thyroid secretion causes a tendency to more profuse bleeding, either normally from the uterus, or abnormally from an injury. When there is subsecretion of the thyroid, a diminished tendency to bleeding is generally in evidence. Positive instances are recorded, however, in which the administration of thyroid, which theoretically should tend to increase the hemorrhage, has caused profuse hemorrhages to cease. Instances are known in which profuse hemorrhages have occurred at the menopause, and, after all other methods, except the blood-serum method, had been tried to stop the bleeding and had failed, the administration of thyroid in large doses caused cessation of the bleeding within a few hours. Thyroid, however, should not be administered to a bleeder except in selected cases.

The treatment of profuse bleeding of patients with a temporary or hereditary hemophiliac tendency is the administration of the serum from the blood of a human being or of an animal. The most satisfactory seems to be the fresh, normal serum of man, the rabbit, or the horse. The serums from dogs, cows, or oxen, while causing the blood to coagulate, seem to have toxic properties, and should never be used. The fresher the serum, the more active seems to be its ability to cause proper coagulation of the blood.

While this serum is most active when given intravenously, it is much better and safer, and almost as active, if administered subcutaneously as one would administer an antitoxin. The serum should be obtained from a laboratory that has the means and the technic to properly prepare it.

Direct transfusion of human blood from a donor to the patient has also proved satisfactory, but such an operation is not often needed.

An active serum will often stop local hemorrhage when applied to the bleeding part, and dried blood-serum and fibrin have seemed at times to stop such hemorrhages. It has even been suggested that a dried fibrin in capsules be administered by mouth. Such a method of administration has not yet been thoroughly proved to be successful.

Fresh horse serum, properly prepared, seems to be efficient. If such straight serum cannot be obtained, diphtheria antitoxin could be utilized, 500 units being sufficient. This amount of antitoxin could do no harm to the patient. Probably a pure horse serum or rabbit serum, however, dated at the age at which it will probably deteriorate as a coagulant, will before long be obtainable as readily as the antitoxin is now obtained.

The average dose of the serum injected subcutaneously is about 20 c.c., to be repeated as soon as the bleeding recurs. Or, two or three such doses, a few days apart, may be administered to a patient who must undergo an operation and who is known to be a bleeder. Such a patient could be tested as to the tendency to hemorrhage by a slight abrasion or a slight incision made at a convenient part.

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[For other information see second page following reading matter]

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VIRGIN LACTATION

As stated in a recent editorial,[1] there is not a little evidence that chemical regulations outweigh the nervous influences in the various processes concerned in the development and functioning of the mammary gland.[2] The facts available, however, do not permit any final conclusion regarding the ensemble of events associated with the varied stages of lactation. The interrelation of the development of secondary sexual characters with the evolution of the milk-producing glands and the apparent dependence of their initial secretory operations on specific changes in the uterus and its appendages are familiar enough.

There is, however, a certain growing group of unique statements about mammary functions which it is difficult to reconcile completely with any current view. A classic instance is the story, related on the authority of Humboldt, of the father who successfully suckled his child. The infant, deprived of its mother, chanced to lie in bed with the father and satisfied its childish impulse by sucking at his nipple. This stimulus is reported to have induced a milky secretion, and the father succeeded in nursing his son at the breast for five months.

Taken by themselves, such seemingly preposterous traditions—and there are not a few of them compiled in the literature—might deserve little serious notice. But in many cases they are coupled with reasonably authentic reports of the secretion of milk by the virgin female. The Munich pediatrist, Professor von Pfaundler, has described a most interesting instance of mammary secretion in a non-gravid virgin heifer just under two years of age.[3] An analysis of the fluid (which has rarely been carried out in other cases on record) left no doubt that the product of secretion was actually milk. It appears that, following a not uncommon habit among calves of sucking each others' rudimentary teats, the one in question had frequently been the subject of an instinctive suckling by its companions in the stable. As a consequence of this repeated traction or suckling stimulus a true and rather profuse milk secretion resulted in the virgin animal. Quantities of 30 to 40 c.c. could often be removed by milking and the possible day's yield was estimated at 2 to 3 quarts. When the animal was removed from its companions the lactation gradually disappeared, despite continued systematic milking.

What bearing may such observation have on the possible rôle of the act of sucking or milking in the genesis of the secretion? Other illustrations of incipient lactation outside of the puerperal period are known; for example, the witches' milk of the new-born of both sexes, and the mammary symptoms associated with changes at puberty and the climacteric or at the menstrual period. We may assume, following von Pfaundler, that in lesser degree at such periods and conspicuously during pregnancy certain hormones reach the circulation and exert a specific assimilative or anabolic stimulus on the rudimentary gland whereby it experiences a marked hypertrophy. This is followed by a second phase in which catabolic processes also are initiated, leading to secretion itself. Now it is by no means inconceivable that the function of the growth hormone for the mammary gland can be supplemented or replaced by other stimuli leading to its development—perhaps even mechanical agencies. Quoting Pfaundler, the common basis for either mode of mammary development would be an impulse leading to anabolic, i. e., constructive changes whether they be instituted by mechanical means (massage, for example) or by specific chemical stimulants. An interesting case of milk secretion from the mammary glands in the male, apparently as the result of manipulating or massaging the gland, was recently reported in THE JOURNAL.[4]

Granting the possibility of milk production in a suitably developed gland which has emerged through some of these as yet obscure influences from its inadequate rudimentary structure, the real act of secretion may in turn be interpreted from various points of view. The flow of milk is known to be dependent in a measure on the emptying of the gland reservoir. It has long been maintained by some authorities that the mechanical act of suckling or milking in itself acts as a stimulus to secretion. But it is equally conceivable that the removal of the milk and the relief of the distended organ serve to withdraw an obstacle to secretion. It may be that there is a more or less continuous tendency toward milk formation in the active gland. If this is held in check by the fulness of the gland and the presence of the product in the acini, the efficiency of sucking or milking appears in a new light. Instead of acting as a direct stimulant these operations merely remove an inhibition and permit an inherent tendency to manifest itself. Thus in the various instances in which milk secretion has been reported to occur unexpectedly, the mechanical factors of sucking or milking which have usually been associated therewith may have played only the secondary part of relieving the obstruction to a normal tendency.

1. The Physiology of Lactation, THE JOURNAL A. M. A., March 2, 1912, p. 638.

2. Mackenzie: An Experimental Investigation of the Mechanism of Milk Secretion, with Special Reference to the Action of Animal Extracts, Quart. Jour. Physiol., 1912, iv, 305.

3. von Pfaundler: Ueber virginelle Lactation, Ztschr. f. Kinderh., 1911, iii, 191; abstr. in THE JOURNAL, Jan. 6, 1912, p. 72.

4. Cressy: Lactation from the Mammary Gland in the Male, THE JOURNAL A. M. A., March 16, 1912, p. 747.

A LEGAL DECISION ON A MEDICAL QUESTION

A recent decision of far-reaching effect changes radically the interpretation and administration of the law regarding immigrants who within three years of admission to the United States become public charges from causes existing prior to landing. This is the decision (No. 120) of Solicitor Charles Earl[1] of the Department of Commerce and Labor, which decision was concurred in and approved by Attorney-General Wickersham on Feb. 3, 1912. The solicitor attempts in a legal opinion to interpret what is a pure and well-settled medical question, and for that reason the decision should not go unchallenged. The solicitor's opinion was asked "with respect to the legal deportation of aliens in a certain class of cases" of which the case cited was typical. The immigration law specifically provides that aliens shall be deported who within three years after landing become public charges from causes existing prior to landing. This test case is one of an alien girl who was certified by an officer of the Public Health and Marine-Hospital Service, and by a member of the New York State Board of Alienists, to be suffering from manic-depressive insanity. This diagnosis was concurred in by the physicians of the Manhattan State Hospital, in which institution the patient was confined, and was not disputed by the solicitor.

The essential features of the case, as summarized in the decision, are as follows:

The alien became a public charge within three years after landing, from insanity which developed subsequent to landing and was ascribed as due, in the certificates already mentioned, to constitutional psychopathic tendencies and mental instability which existed as predisposing causes prior to landing. These certificates did not present an extensive review of the facts or reasons on which they were based. It is contended, on the other hand, that there is no affirmative fact available tending to show that such constitutional psychopathic tendencies and mental instability existed prior to landing. The solicitor therefore concludes that the medical opinion — not the diagnosis, but the assumption of the existence of an underlying cause prior to landing—is wholly *ex post facto*, because the alien has become insane; and that the medical opinion assumes, since constitutional tendencies existed when the insanity developed, that therefore they existed at all prior times. He adds, very significantly and naively, that in "many cases such as this one, some event in the life of the alien since landing appears in the evidence, suggesting to the ordinary mind an adequate cause to account for the present insanity, independent of any constitutional tendencies or mental instability, e. g., in this case, the account of a sexual assault on the girl, and the ensuing shame and worry on her part."

So here we have the enlightening spectacle of a layman, eminent in his own profession of the law, calmly arrogating to himself the ability to pass judgment on a purely medical question, and at that, a question in the most abstruse and difficult department of medicine, namely, psychiatry. A moment's consideration reveals the passing absurdity of the situation. The clinical records of a sick person are critically examined by a layman, who assumes his own ability to interpret them correctly, and his examination convinces him that the physicians, experts all in mental diseases, had no grounds for their opinion as to the causes of the disease, although, strangely enough, he apparently finds no data contravening their unanimous diagnosis of manic-depressive insanity. By attempting to pass judgment on a medical question which he is neither by training nor by experience qualified to judge, he has committed himself to a self-contradictory statement. Manic-depressive insanity is known to depend, as does no other mental disease, on constitutional psychopathic tendencies and a certain mental instability.[2] There was no evidence that a sexual assault occurred in this case, aside from the unsupported statement of the patient herself, made *after* the onset of mental symptoms. It was almost certainly delusional. Yet as the decision reads, "to the ordinary mind," this problematical assault was the true cause of the insanity. We see illustrated here the fallacies inherent in the application of purely legal reasoning to medical subjects.

But Decision 120 has a very practical and far-reaching influence. In effect it becomes part of the United States immigration law, and as such it is "published for the information and guidance of immigration officials and others concerned." It becomes the basis on which warrants for deportation will be denied in the case of hundreds of insane aliens, who within three years of landing in the United States, will be admitted to various hospitals and public institutions throughout the country, because of mental disease which in the opinion of the physicians examining and treating them are due to causes which existed prior to their arrival. The State of New York, for example, which is most vitally concerned,[3] will have on its hands many more of a class which, under a more rational interpretation of the law, furnished about 350 deportations annually. Of 381 aliens certified to be deportable in New York State alone for this reason in the year ended Sept. 30, 1911, about 320 were certified to be insane from causes existing prior to landing, such causes being "constitutional psychopathic tendencies," and "mental instability."

This decision nullifies all protection afforded the country against the immigration of aliens with constitutional tendencies to insanity. That a similar construction is not in accord with the policy of other branches of the federal government is shown by the fact that enlisted

1. Decision 120, Dept. Commerce and Labor, Jan. 11, 1912.

2. Rogues, de Fursac J.: Manual of Psychiatry, Tr. by Dr. A. J. Rosanoff, second Am. Ed., pp. 337-8. Kraepelin: Clinical Psychiatry, adapted from seventh German edition of Kraepelin's Lehrbuch der Psychiatrie, by A. Ross Diefendorf, Ed. 2, p. 382. White, W. A.: Outlines of Psychiatry, III, Ed. 2, pp. 21-2.

3. Medical Aspects of Immigration, THE JOURNAL A. M. A., Dec. 30, 1911, p. 2142. See also Abstract 79 in THE JOURNAL, Feb. 17, 1912, p. 523.

men of the Army, Navy and Marine Corps who become the subjects of manic-depressive insanity and analogous conditions are not considered to have contracted the disease in the line of duty, but the disease is held to be due to causes existing before enlistment.

It cannot be too strongly urged that Decision 120 should be reconsidered, and the immigration law in question be interpreted in accordance with justice and reason.

FOOD PRODUCTS FOR DIABETICS

One might suppose that enough had been written in recent years about the unreliability of most of the so-called gluten flours and gluten foods from the standpoint of diet in diabetes to eliminate them from use in all cases in which any serious attempt to institute a carbohydrate-free regimen is contemplated. A study of the markets shows, however, that there must be a steady and even growing demand for the products under discussion, if the increasing number of "brands" offered for sale may be taken as an index of the business. It should be frankly stated that the entirely unsatisfactory "standard" established by the government and accordingly adopted by various boards is plainly responsible in good measure for the unfortunate situation that now exists. Herein is exhibited the danger of entrusting the formulation of important rules and regulations to persons who, owing to limited experience, may be incompetent to decide problems of such scope.

The United States standard for gluten flour declares that it is "the clean, sound product made from flour by the removal of starch, and contains not less than 5.6 per cent. of nitrogen and not more than 10 per cent. of moisture." Translated into other terms, this calls for a protein content of only about 40 per cent., leaving the unfortunate possibility of having a preparation which is one-half starch marketed *in conformity with legal requirements.* The manufacturers have not been slow to grasp the situation. A recent series of analyses of goods sold as gluten preparations in the state of Connecticut[1] showed that most of them exceed the requirements of the standard; yet these very products, properly labeled and legally sold, exhibited starch contents ranging from 27 to 42 per cent. One widely advertised brand carried the label: "A minimum of starch and a high protein content. Delight to diabetics." Neither of the first claims was true; and a material containing 50 per cent. of nitrogen-free extract of which nearly 38 per cent. is starch, may be, as Street remarks, a very dangerous "delight to diabetics."

If gluten bread is to mean (as it does with the sanction of the "government standard"), at best a few less grams of starch than ordinary bread will furnish, this semi-official permit for its distribution with an implied superiority as a diabetic food product cannot be too vigorously combated. The other dietetic uses of gluten flour products are so limited that one must always bear the diabetic application in mind. A compulsory indication of the starch or carbohydrate content on the label would presumably serve to check the danger by calling attention to the undesirability of the product.

1. Street, J. P.: Report of the Conn. Agric. Exper. Sta., 1911, Part II, p. 134.

LIFE-INSURANCE COMPANIES AND CONSERVATION OF HUMAN LIFE

The great life-insurance companies are becoming practically interested in preserving and promoting the health and longevity of their policy-holders. Some have established sanatoriums for the treatment of chronic wasting diseases. One of the largest companies has begun the issue of a quarterly publication devoted to the human conservation problem as it affects life-insurance particularly, and giving instructions in hygiene and correct living, together with morbidity and mortality statistics, etc.

The great and peculiar value of the assistance given by the life-insurance companies to the human conservation problem lies in the fact that the many thousands of policy-holders are individuals in the most productive period of their lives, the men and women who really carry on the work of the world. Not only are they, at the time of their acceptance by the insurance companies, in prime physical condition, but they come from the more intelligent, educated and thrifty classes and are, from both eugenic and economic points of view, the most important individuals of their communities. Some figures given in the publication above referred to in regard to the increase and decrease in the death-rate at various age periods are interesting and are perhaps somewhat at variance with the popular belief concerning the general increase in human longevity. While there has been a decrease in the death-rate below the age of 40, the figures show that this has been due almost wholly to checking infectious diseases most common to young and early adult life. Under the age of 20 it amounted to 17.9 per cent., between 20 and 30 to 11.8 per cent., while between the ages of 30 and 40, the most important period from many points of view, the decrease has been only 2.3 per cent. While the age of 40 represents perhaps the high tide of economic effectiveness of the individual, yet it may fairly be said that an individual at that age should have practically twenty years of great usefulness before him, notwithstanding the erroneously quoted statement to the contrary attributed to a great medical authority. The mortality records in the United States since 1880, from which the above figures were also quoted, show that the death-rate between the ages of 40 and 50 has increased 13.2 per cent., from 50 to 60, 29.2 per cent., and over 60, 26.4 per cent.

It will thus be seen that the small percentage of increase in life expectation between 30 and 40 and the comparatively large percentage of diminution in life

expectancy after the age of 40 imperatively call for well-directed efforts for the conservation of lives during this important period. It is an evidence of the wisdom and progressiveness of the insurance companies thus to combine considerations of humanity with good business policy.

HAMPERING ANIMAL EXPERIMENTATION

By an interesting coincidence the report of the British Royal Commission on Vivisection is issued almost exactly a month after the death of Lord Lister. According to the newspaper reports, it suggests a still further hampering of animal experimentation in Great Britain. Some of the commissioners ask for the exclusion of dogs, cats and anthropoid apes as subjects of experimental research on account of their intimate association with man. The general trend of the report is not so unfavorable to animal experimentation as the antivivisectionists hoped, but there is no doubt that it will seriously interfere with experimental medical research in England.

All the great English periodicals, secular and medical, have been heralding Lord Lister's work and most of them have joined in the declaration that probably what he accomplished for surgery saved more lives than were destroyed in all the contentious wars of the nineteenth century. If there is one feature of Lord Lister's character that is emphasized in all his biographical sketches more than any other, it is his kindliness of heart. All his obituaries proclaim that he might well bear the honorable designation of gentleman. He himself, when asked what was the quality most necessary for a surgeon, declared, "The first and really indispensable requisite of a surgeon is a feeling heart." Then he added "People do not always believe me when I say it, but it is so." His life was a constant exemplification of that opinion.

He himself has told us, however, of his experiments on animals. Most of his work would have involved serious and unjustifiable risks to patients if he had not previously employed animal experimentation. He tells us of using various forms of absorbable ligatures on the arteries of calves, in order to determine what special preparation of catgut was most suited to tie human arteries. How much those experiments meant for human beings, even the surgeon of the modern time can scarcely tell, but any old-time surgeon who had seen many fatal secondary hemorrhages because of septic ligatures would know very well. No patient in whom a ligature had been tied was safe from serious infection until the ligature came away. With the introduction of absorbable ligatures, however, most of that danger disappeared at once, because the wound could be thoroughly closed in from the air and the condition made to resemble those which occur in connection with simple fractures of bones. These always heal without disturbance, at least from infection, and it was this condition as far as possible that Lord Lister considered ideal and tried to reproduce in his surgery.

Many of the calves that he used for experimental purposes were apparently animals too young for the market and he obtained permission from the butchers who were keeping them to tie certain important arteries in their heads. He was afterward given these heads for careful study. There probably never have been calves that have done so much good to the human race as those on which Lister's experiments were made. It is extremely doubtful if under present conditions in England Lord Lister would have been allowed to perform these experiments. They were done in the midst of his work as a practical surgeon. He did not and could not have the laboratory facilities that are available in the modern time and without which animal experimentation is practically illegal. Is some future Lister to have his life-work spoiled because of fear that he will inflict pain on animals?

Almost at the same time as Lister's experiments were being made, Pasteur was doing, in France, work of even more vital significance for humanity. That also required animal experimentation. He, like Lister, was one of the kindliest of men. He came near abandoning his work on rabies because it included the infliction of pain on human beings. His name is sometimes cited as that of one who inflicted great cruelty on animals. He probably saved more human suffering, and animal suffering as well, than any other man that ever lived. When we take in connection with his own work the magnificent extension of it by Lister who acknowledged him as his master, it is easy to understand what two gentle scientists can accomplish by the infliction of a little necessary pain on animals in order that future generations may be spared almost untold suffering.

Shall not the facts that are so opportunely brought to mind by the death of Lord Lister and the publication of numberless biographies of him prove of service in making non-medical legislators understand just what the position of the medical profession is in this matter? We too want to save all the pain that we can. The infliction of a single bit of unnecessary cruelty we are as ready to condemn as any antivivisectionist. We want freedom of experimentation, however, in order that progress in medicine and surgery may continue as gloriously in the future as it has in the past.

WHAT'S THE MATTER WITH MICHIGAN?

Last October, under the caption "What's the Matter with Kansas?" THE JOURNAL expressed surprise that Kansas should tolerate the mail-order medical faker, "Professor" Samuels. Samuels, as will be remembered,[1] sells a weak solution of sugar and salt in water, at from $5 to $25 an ounce, for the cure of cancer, consumption, and any other disease which the gullible may have or may think they have. Surprise was expressed because

1. Exposed in THE JOURNAL A. M. A., Dec. 24, 1910; reprinted in "Nostrums and Quackery," also in pamphlet form. The latter will be sent on receipt of a stamped addressed envelope.

Kansas is a progressive and wide-awake state which has done splendid work in protecting its citizens against the food adulterator and the "patent-medicine" faker. But, for some reason, it tolerated Samuels. That tolerance has evidently ceased, for Samuels is now notifying his prospective dupes that, after March 27, 1912, he is going to move to Detroit, Michigan. Of course he does not admit that the reason is that Kansas has grown too hot for him; not at all. He is changing his address because the "phenomenal growth" of his business necessitates his "locating nearer the center of the United States." If we had been told that this faker was going to move into another state and presumably into one in which his mail-order fakery would be subject to less inspection on the part of officials than in any other, we should have guessed Michigan as the state to be selected. We believe we are not overstating when we say that the state of Michigan has as many mail-order medical fakes of a vicious and fraudulent character as can be found in any other three states in the Union, irrespective of population.

We have long wondered what peculiar influence protected swindlers in this state. That wonder was increased by our experience with the Van Bysterveld fraud at Grand Rapids. A member of THE JOURNAL staff, it will be recalled, worked up a clear case against this concern, the matter appearing[2] in THE JOURNAL, Jan. 7, 1911. Briefly, the Van Bysterveld Company advertised to diagnose any disease from the alleged examination of such two-dram samples of urine as might be sent in. Five samples were sent in from the Association's laboratory, three of them consisting of hydrant water, anilin dye and ammonia and two of them being merely hydrant water and glucose. They were mailed from five different addresses and five widely differing "diagnoses" came from the Van Bysterveld concern in reply. It was proved without a shadow of a doubt that the company was operating a fraudulent business.

A post-office inspector, who, by the way, not only lived in the same town as Van Bysterveld, but was a neighbor of this man, came to Chicago and asked that all of the evidence in the hands of THE JOURNAL might be turned over to the government for the purpose of making a case against this mail-order fraud. This was done more than a year ago. All of the original letters from Van Bysterveld, with the envelopes in which these letters came, carbon copies of all of the letters written to Van Bysterveld and all other matter pertaining in any way to the case we turned over to the government. No case has been brought against these swindlers and for some reason the post-office inspector to whom the matter was given has been transferred from Grand Rapids to some other location. The reason we do not know.

The list of mail-order medical concerns operating in Michigan would probably make a good-sized directory. In THE JOURNAL'S files there is a very incomplete collection of these delectable institutions, a collection which is more instructive than edifying. To name a few of these: We find in Battle Creek, "Peebles' Institute,"[3] which sells a fake epilepsy cure; W. T. Bobo,[4] a goiter quack; T. Gorham, a catarrh cure faker and the F. J. Kellogg obesity cure humbug. Among the dozens in Detroit, the Interstate Remedy Company[5] advertises to cure "weak men," but doesn't; the Protone Company will make you fat and the Rengo Company[6] will make you thin, both concerns being run by the same individuals; and the Marmola Company[7] sells a laxative pill as a sure "obesity cure." In Jackson, we have the two consumption cures, "Lung-Germine"[8] and "J. Lawrence Hill,"[9] both exposed at length in THE JOURNAL; the "Magic Foot Drafts,"[10] a fraudulent rheumatism cure; "Van Vleck Pile Cure,"[11] and a dozen others equally fakish. "Tuberculozyne,"[12] a consumption cure sold by the horse doctor, Yonkerman, may be ordered by mail from Kalamazoo, while letters to Marshall may bring Gauss' combined treatment for catarrh, Brennan's cure for pimples or Brooks' cure for rupture. These are but a few from THE JOURNAL'S admittedly incomplete list. Every one of these concerns advertises nationally, many of them advertise internationally, and all of them obtain their dupes through the instrumentality of the United States mail.

The post-office department has done splendid work in many instances in putting medical swindlers out of business. Why Michigan seems to be exempt from federal activity in this line is a mystery. It would be interesting to know what sinister influence makes that state such a safe harbor for mail-order medical fakers.

Current Comment

NOSTRUM ADVERTISING IN THE RELIGIOUS PRESS

No class of publications has made greater progress in censoring its advertising than the religious journals. Four or five years ago, the various church publications fairly reeked with advertisements of nostrums of the most fraudulent and vicious kinds. A wonderful house-cleaning has taken place in the past half-decade, and most religious journals of the better class have dissolved their previous coalition with the "great American fraud." Here and there, of course, are to be found

2. Reprinted in "Nostrums and Quackery;" also issued in pamphlet form; price 4 cents.

3. THE JOURNAL A. M. A., Nov. 4, 1911, p. 1554.

4. THE JOURNAL A. M. A., Jan. 14, 1911, p. 136; also Nov. 4, 1911, p. 1554; also "Nostrums and Quackery," p. 126.

5. THE JOURNAL A. M. A., Oct. 7, 1911; reprinted in pamphlet form, price 4 cents.

6. THE JOURNAL A. M. A., Oct. 24, 1908.

7. THE JOURNAL A. M. A., Oct. 16, 1909; "Nostrums and Quackery," p. 459.

8. Reprinted in "Nostrums and Quackery;" also in pamphlet form; price 4 cents.

9. Reprinted in "Nostrums and Quackery;" also in pamphlet form; price 4 cents.

10. THE JOURNAL A. M. A., May 20, 1911; reprinted in "Nostrums and Quackery."

11. Referred to in article on J. Lawrence Hill consumption cure, "Nostrums and Quackery," p. 115.

12. THE JOURNAL A. M. A., Oct. 8, 1910; "Nostrums and Quackery," p. 100; also in pamphlet form; price 4 cents.

church papers that are still willing to share the blood-money of quackery for the sake of increasing their revenue. A correspondent has sent us an advertisement torn from the *Northern Christian Advocate*. It occupies half a page and deals with that most impudent of frauds, the Oxypathor. As our readers remember, the Oxypathor[1] is a later name given to the Oxygenator, one of the numerous devices sold in the exploitation of what we have called "gas-pipe therapy." The Oxypathor consists of two flexible cords attached to a piece of nickel-plated piping filled with an inert mixture of clay and coke dust and sold as a "cure" for diphtheria and nearly every other disease. It has just as much curative value as a tomato-can with a piece of string tied to it. The sale of this device was prohibited some time ago in the state of Vermont, and its importation into Australia has been prohibited by the government of that enlightened commonwealth. It is, in fact, a viciously wicked fraud, but the publishers of the *Northern Christian Advocate* seem to be willing to participate in the profits that accrue from the sale of this swindling device. It is but fair to say that while the *Northern Christian Advocate* is a Methodist publication it is not owned by the Methodist church, but by a number of ministers. Apparently, there is the same commercial domination of what may be called the independent religious press as that which at present afflicts a large proportion of the "independent" medical press. The evil in both cases will doubtless continue until the intelligent subscribers refuse longer to be *particeps criminis* with the publishers in perpetuating fraud.

THE BLOOD IN UNDERNOURISHMENT

The classic studies on inanition made by Voit, many years ago, show that the blood does not waste in parallel with the other tissues of the body. Herein one may see a beneficent protective device whereby the respiratory functions of the circulation are maintained intact under conditions manifestly adverse. These claims have at times been called into question. Obviously it is of no small interest to know whether and to what extent alterations in diet, especially in the direction of undernutrition, may tend to impoverish the blood. The failure of appetite and consequent enforced complete or partial inanition may draw on the tissue-stores. Is the blood called on to contribute its share and does it thereby deteriorate from a physiologic standpoint? To this an answer is furnished by recent experimental studies of Boycott and Chisolm.[2] Rats were placed by them on unsuitable diets, especially such as were deficient in protein, until they lost a considerable portion—from one-quarter to one-third—of their body weight. This loss was such that some material wasting of important tissues must be assumed. Yet the undernourished animals showed no diminution in total oxygen capacity and the blood was left much in its original condition. The investigators conclude that the body does not feed on its red cells during protein starvation. By comparison of the animal data with human statistics Boycott and Chisolm are further of the opinion that the duration of life of the red corpuscles in larger animals and man is probably far longer than the two or three weeks which, they say, is usually ascribed. How much longer it is at present quite impossible to suggest.

1. This fake and several other similar ones are exposed in an interesting pamphlet published by the American Medical Association, "Oxydonor and Similar Fakes," price, 4 cents.

2. Boycott and Chisolm: The Influence of Underfeeding on the Blood, Jour. Path. and Bacteriol., 1911, xvi, 263.

WRONG DIAGNOSIS NOT SLANDER

In the Medicolegal department of this issue appears a decision of the Court of Appeals of the District of Columbia, which is of direct interest to every physician. In the case of *Brice versus Curtis*, the evidence showed that the plaintiff, a woman of 38, consulted the defendant, a physician, regarding the failure of her menstrual flow to appear. The physician made a diagnosis of three months' pregnancy. Subsequently, it developed that the difficulty was due to premature menopause. The action for slander was based on the fact that the physician told the patient in the presence of her sister, who accompanied her, that she was pregnant, when she was not. The court holds that the communication was a privileged one, an expression of scientific opinion, and that no evidence of malice or vilification was shown, neither was there any evidence that the diagnosis was not a reasonable one under the circumstances. The opinion expressed was apparently a mistaken one, but was made in good faith. The substance of the decision is that a mistake in diagnosis is an error in scientific judgment and not a libel.

DR. WILEY RESIGNS

Damned with faint praise from the nation's chief executive, hampered by a reactionary departmental chief who has long since outlived his usefulness, badgered by a pettifogging lawyer of the night-school variety who, as a representative of the vicious interests, was able to nullify or render abortive efforts made in the interest of public health, Dr. Wiley has given up the unequal fight and handed in his resignation. Thus retires from the government service one of the most useful officials this country has ever had. An implacable foe of fraud and deceit, Dr. Wiley has for years stood between a more or less helpless public and the vested interests that have developed to a science the business of adulterating foods and sophisticating drugs and in other ways threatened the public health. On every debatable question regarding the wholesomeness of foodstuffs, Dr. Wiley was consistently on the side of the people; his superior officers have been just as persistently on the side of those who have made their millions by substituting cheap and often poisonous drugs for more expensive but wholesome foods. Assailed from without by some of the most powerful, vicious and corrupt of organizations, he was also antagonized from within by the political henchmen of the same organizations. To Dr. Wiley more than to any other one man, the public owes the Food and Drugs Act and to Dr. Wiley it also owes whatever of good has been accomplished by that act. It is to be hoped that his forced retirement will result in such an upheaval of public indignation that the forces of evil at present in

control of the Department of Agriculture will be driven into political oblivion and the department filled by men who hold decency above dollars, probity above pelf and public health above private gain.

WHO WILL SUCCEED WILEY?

There are two groups of people who are anxiously watching and waiting to see who will be Dr. Wiley's successor. In one group are the dishonest manufacturers, the food adulterators, the whiskey blenders, and the fraudulent patent medicine promoters: those "interests" that are preying on the people through fraud and misrepresentation in various ways. In the other group are the people of the United States, and the honest manufacturers. Which of these groups will be kept in mind in the selection of the man? The newspapers announce that President Taft immediately telegraphed to the leading universities asking for suggestions as to the right man to succeed Wiley. This looks as though the President were anxious to get the right man. But the right man in this case need not necessarily be the best chemist in the country. What is needed is a man who is fundamentally honest; who has the good of the public and not of the "interests" at heart; one, above all, who has honest convictions and has the courage to carry out such convictions. But will the President dare to ask such a man to take a position in which he will be surrounded with the restrictions that made Wiley consider it nearly useless? No self-respecting man, no man who is thoroughly qualified in every way for the position, would accept it under present conditions. There must be a further change in the personnel of the bureau which is by law presumed to enforce the Food and Drugs Act and a removal of the restrictions on its activities. Until that change is made, no one worthy to succeed Wiley ought to be expected to accept the position.

Medical News

COLORADO

Sterilization of Garbage.—The State Board of Health now requires the sterilization of garbage collected in towns and used for the feeding of hogs.

Screening of Food.—The Colorado Grocers' Association has cooperated with the State Board of Health by agreeing suitably to screen food exposed for sale.

Trachoma in State.—Dr. Rose Kidd Beere, Denver, examiner of children of public schools and institutions, has found 102 cases of trachoma in the State Home for Dependent Children.

Standardizing of Lodging Houses.—The United Charities of Denver has requested the health commissioner to standardize the cheap lodging houses of the city by requiring a certain number of points in sanitation, in order to be allowed to continue in business.

Pollution of Streams.—The State Board of Health is sending out thousands of circulars warning against the pollution of streams. These posters are to be tacked to trees in the forest reservations. This was done last year and it is believed this action contributed to the reduction of typhoid in the state, as there were 1,003 fewer cases in 1911 than in 1910.

GEORGIA

State Sanatorium Election.—At the annual meeting of the Board of Trustees of the State Tuberculosis Sanatorium held in Atlanta, March 6, the following officers were elected: president, Dr. T. R. Whitley, Douglasville; vice-president, Dr. W. B. Crawford, Lincolnton, and secretary, Dr. Jeff Davis, Toccoa. Dr. Davis was also made chairman of the executive committee, and Dr. H. R. Slack, LaGrange, vice-chairman.

State Board Urges Screening.—The State Board of Health, in a recent bulletin, calls the screen the family's quarantine against many diseases and urges that houses be screened to keep out flies and mosquitoes, which are the demonstrated agencies of many diseases. The board also advises that stagnant pools be drained or oiled; that rain barrels be screened or oiled, and that all food products be screened to avoid contamination by flies.

ILLINOIS

Typhoid Spread at Party.—An epidemic of typhoid has followed a dance recently held in St. Charles, where more than thirty cases are reported.

New Officers.—Canton Physicians' Club: president, Dr. D. D. Kirby; secretary-treasurer, Dr. William O'Reilly.——Galesburg Medical Society: president, Dr. C. E. Quaife; secretary, Dr. E. N. Nash.

Extension to Tent Colony.—The officials of the Ottawa Tent Colony have let a contract for new buildings, the cost of which will amount to more than $25,000. These include offices, a research laboratory, a new medical building and an operating room.

The State Board of Health.—At the last meeting of the Illinois State Board of Health, the certificate of Dr. Charles B. Bateman, Vandalia, charged with impersonating Dr. George B. Carson, Vandalia, in the examinations of the Missouri State Board of Health in July, 1911, was revoked for unprofessional and dishonorable conduct.——The mandamus suit of the Littlejohn College and Hospital against the State Board of Health for recognition as a medical college, is still pending in the Municipal Court and a hearing is expected within the next ten days.——The mandamus suit of the National Medical University of Chicago against the State Board of Health for recognition, which was commenced more than a year ago, is now in the Appellate Court.

Personal.—Dr. J. W. Pettit, Ottawa, sailed for Europe, March 14.——Dr. E. W. Wahl, Tampico, slipped on a piece of ice, March 7, fracturing his leg just above the ankle.——Dr. F. H. First has been elected president; Dr. Louis Ostrom, vice-president, and Dr. John C. Souders, secretary-treasurer, of the medical and surgical staff of St. Anthony's Hospital, Rock Island.——Dr. E. A. Hall, Henry, fell March 3, fracturing his patella.——Dr. Frank W. Rulien, Joliet, who has been ill at the Presbyterian Hospital, Chicago, for fourteen weeks, is reported to be convalescent.——Dr. R. L. Estes, Meridosia, who has been ill in a hospital in Jacksonville, as the result of injuries sustained in an automobile accident, has returned home convalescent.——Dr. C. S. Nelson, Springfield, is ill at St. John's Hospital with appendicitis.

Chicago

New Emergency Hospital.—A branch of the Emergency Hospital was opened at the East Chicago Avenue Police Station, March 12. It has accommodation for four patients and an operating room and is equipped with all appliances necessary for first aid.

Cornerstone to Be Laid.—The German ambassador to the United States, Count von Bernstorff, will come to Chicago, March 24, to deliver an address at the laying of the cornerstone of the new building of the German Hospital at Grant Place and Hamilton Court.

Epidemic in County Hospital.—It is reported that one-fifth of the nurses in Cook County Hospital are at present incapacitated for duty on account of an epidemic of contagious diseases. The nurses claim that their resistance has been lowered by the necessity of overwork.

Health Bond Issue.—The last issue of the Bulletin of the Department of Health urges on the voters the necessity of a bond issue, which will allow the construction by the city of a contagious disease hospital, to cost $300,000. The remaining $80,000 called for in the proposed bond issue are for three new public baths and extensions and repairs in two of the public bath houses already established.

Personal.—Dr. B. Barker Beeson sailed for Europe, March 19.——Dr. George C. Hunt, chief surgeon of the police department, has been elected a director and appointed chief surgeon of the Amicable Accident Association.——Dr. Alvin Helwig, city ambulance physician at Chicago Avenue, was scalded on the head and neck recently by a cup of hot coffee thrown at him by a prisoner in the station.——Dr. P. J. H. Farrell has been elected president of the newly organized Army and Navy Club of Chicago.

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Health Department Acrostics.—The Department of Health, in its weekly bulletin, graphically summarizes diphtheria and measles as follows:

DIPHTHERIA
Indifference to it is fatal.
Prompt treatment is necessary.
Hospitalization gives control.
Terminates too many lives.
Hostile to child life especially.
Entraps the careless.
Requires strict quarantine.
Is easily cured.
ANTITOXIN CURES IT.

MEASLES
Easiest disease to catch.
Alarming in infants.
Scores too many deaths.
Loose quarantine spreads it.
Expose no child to it.
Sane mothers protect their children.

IOWA

Personal.—Dr. W. A. Bryan, Kent, has been appointed assistant physician at the State Hospital, Cherokee.——Dr. H. M. Stevenson, Madrid, while preparing to move to Perry, was struck on the head by the corner of a piano box and painfully injured.

New Officers.—Henry County Medical Society, February 29: president, Dr. F. R. Wilson, New London; secretary-treasurer, Dr. O. A. Geeseka, Mount Pleasant.——Linn County Medical Society, March 12: president, Dr. B. L. Sheldon; secretary, Dr. H. W. Bender, both of Cedar Rapids.

LOUISIANA

Meningitis in Shreveport.—Up to February 24, thirty-seven cases of cerebrospinal meningitis had been reported in Shreveport, with thirteen deaths.

Personal.—Dr. W. T. O'Reilly, New Orleans, has resigned as a member of the Sickles Fund Commission.——Dr. George R. Fox, Morgan City, in charge of the hookworm work in Caddo Parish, has returned and resumed his duties. Up to date he has treated more than five hundred cases of the disease.——Drs. Arthur A. Herold and Thomas P. Lloyd have been appointed members of the Board of Health of Shreveport, and Dr. Herold has succeeded Dr. A. S. Reisor as president of the board.——Dr. R. E. Swigart, physician in charge of the United Fruit Company's Hospital at Bocas del Toro, has been ordered to New Orleans to establish headquarters there for the hospital and sanitary work of the company.

New Orleans School of Tropical Medicine.—The New Orleans School of Tropical Medicine and Hygiene of the Medical Department of the Tulane University of Louisiana, New Orleans, began its laboratory and systematic course in tropical medicine, hygiene and preventive medicine in September last and is making strenuous endeavors to obtain a sum of not less than $60,000 for the equipment of laboratory, museum and a library, and an endowment of $20,000 to $25,000 a year for five years. For the founding of a new research library the sum of $1,400, representing the surplus contributed for the purpose of the fight against yellow fever in 1905, will be applied, and Miss Lodilla Ambrose has been appointed librarian and curator of the museum of the school.——Dr. Creighton Wellman, head of the department, made a strong plea for instruction in hygiene and sanitation in an address made before a large body of students and faculty of Tulane University, March 6.

Active Health Work.—Dr. Oscar Dowling, Shreveport, president of the State Board of Health and state health officer of Louisiana, has been actively engaged in the cleaning up of New Orleans and other cities in Louisiana. Improvements in hygiene and sanitation are being required of restaurants, canning factories and other plants.——Dr. Mayer A. Newhauser, New Orleans, state medical inspector, who recently inspected the Julian Canning Company's plant at Violet, reports that at least 200 children and women were working under most filthy conditions. The state board has served notice on the company so that it will be compelled to close.——The good results of the cleanliness crusade are already evident. Dr. Dowling has given notice that the ordinances of the sanitary code will be enforced relative to restaurants, hotels, markets, slaughtering pens and railway stations. Places catering to the public must be kept clean, and nuisances of all kinds, especially those on vacant lots, must be abated. Factories also must comply with the ordinances.——Dr. Dowling has caused a bill to be prepared providing for the reporting of all births and deaths throughout the state, and has also planned to have a department added to the state health department for the eradication of mosquitoes.——The Caddo Parish grand jury returned thirty-six indictments March 1 against alleged violators of the state sanitary laws. The indictments were based on the testimony of Dr. Dowling, who presented photographs showing the alleged unsanitary premises.——During the February trip of the state board of health train, Dr. Dowling instructed the health officers of the state regarding the treatment and prevention of meningitis.

MARYLAND

Tuberculosis Exhibit.—The traveling exhibit car of the Maryland Association for the Prevention and Relief of Tuberculosis had a very successful week in Baltimore, and moved to Brooklyn, March 7.

Ask for Bureau of Sanitary Engineering.—A party of Maryland physicians appeared before the committee on appropriations of the state legislature, March 5, asking an appropriation of $10,000 for the establishment of a bureau of sanitary engineering. They spoke of the importance of making the watersheds free from pollution and thus curbing the ravages of typhoid which causes 400 deaths a year in the state.

Baltimore

Medical Students Organize.—To promote closer relationship among the students of the medical department of the University of Maryland, and to foster more intimate acquaintance between the student body and the teaching staff, the Randolph Winslow Surgical Society has been organized, composed of thirty-five active members, twenty-three of whom are seniors and the balance juniors.

Dispensary Soon to Open.—The dispensary at Locust Point, connected with the Bishop William Paret Memorial, will be opened in a few days. Dr. J. Williams Lord is president of the institution, and in charge of the department of skin diseases; Dr. Anna Abercrombie is in charge of the department of diseases of women and children, and Dr. B. C. Catlin, of the department of diseases of the eye and ear.

Personal.—Dr. Adolf Meyer sailed March 16 for Switzerland.——Dr. Clapham Pennington sailed for Europe, March 30.——Dr. Louis V. Hamman is ill in John Hopkins Hospital with typhoid.——Dr. Edward E. Lamkin, Nanticoke, who underwent operation for the uniting of the bones of the arm, fractured last December, has recovered.——Dr. Carl Voegtlin, assistant professor of pharmacology at Johns Hopkins Medical School, is seriously ill with pneumonia in the Johns Hopkins Hospital.——Dr. Clarence E. Downes, health warden, is ill with septicemia, due to an operation wound.

MASSACHUSETTS

Vaccination Against Typhoid.—In compliance with the new Navy regulations, all the officers and enlisted men under 45 years of age at the Charlestown Navy Yard—1,300 in all—have been inoculated with antityphoid serum.

Chicken-Pox and Not Small-Pox.—In the case of the Cunard steamer *Ascania*, which was held at the Boston quarantine station and whose 538 steerage passengers were put in quarantine at Gallup's Island, Boston Harbor, the suspect was found to be ill with chicken-pox and not small-pox, as had been previously diagnosed. The steerage passengers were, therefore, promptly released and sent on their way.

Personal.—Dr. Charles S. Minot, James Stillman professor of comparative anatomy in Harvard Medical School, has been appointed exchange professor to Germany, and not Dr. James J. Minot, as erroneously announced in THE JOURNAL, March 16.——Dr. Frederic M. Briggs has been promoted to professor of surgery, Dr. William Merritt Conant has been appointed professor of clinical surgery, and Dr. William Allen Brooks, Jr., assistant professor of clinical surgery, in Tufts College Medical School, Boston.——The house of Dr. Hugh Cabot, Boston, was damaged by fire and smoke March 12 to the extent of $2,000.

Leper Board.—The State Board of Charity has established a voluntary board consisting of Drs. Charles J. White and Harvey P. Towle, who have lent their assistance in years in the diagnosis and treatment of leper cases in the state; Dr. Joseph W. Proctor, Boston, the leper expert of the state board; Dr. Burt Wolbach, Boston, professor of bacteriology in Harvard Medical School, and Dr. Clara P. Fitzgerald, Worcester, a specialist on skin disease, to further the scientific care and treatment of lepers and to promote the study of the disease. Dr. White is president and Dr. Fitzgerald secretary of the board.

New Dean of Graduate School.—Dr. Horace D. Arnold has been appointed dean of the Graduate School of Medicine recently established as a department of Harvard University under the Faculty of Medicine. This school is to take control of all graduate medical instruction beginning October. The work of organization has already been begun by Dr. Arnold, and plans are being developed which promise to make this department a very important factor in the medical education of the United States. The new feature in the movement is not that of graduate instruction, but in the recognition that this work is of sufficient importance to warrant the establishment of a separate department of the university successfully to carry it out.

Hospital Notes.—The Boston city council has appropriated $50,000 for a children's hospital in connection with the consumptive hospital department.——The Boston Dispensary has opened, under the direction of Dr. John D. Adams, a class in gymnastics to meet twice a week, for children with lateral spinal curvatures, round shoulders, or faulty positions in standing.——Plans and specifications for the new St. Elizabeth's Hospital, Brighton, have been approved. The buildings will be located at the corner of Cambridge and Washington streets, and because of the propinquity of the monastery of the Passionist Fathers, will have the same mission style of architecture—a white plaster exterior with red tile roofs. The large central administration building will front on Cambridge street. From either end will extend wings rising by three terraces, and the upper or back line of the rectangle thus formed will be closed by a chapel and nurses' home. The hospital will provide for one hundred and fifty patients.

MISSISSIPPI

Change of Management.—Dr. H. M. Folkes, Biloxi, announces that he has canceled the lease formerly had on his institution in that city, and that hereafter it will be conducted under the old name of Biloxi Sanatorium. Dr. Folkes is president and Dr. R. L. White superintendent of the institution.

Personal.—Dr. B. H. Paslay, West Point, was attacked with a poker by an insane negress, who had been employed as a cook in his house, and seriously bruised, and was obliged to shoot the assailant in self-defense.——Dr. S. W. Glass, Jackson, has been appointed first lieutenant, M.C., N.G., Miss.——Dr. W. W. Smithson, Jackson, has formally assumed charge of the office of secretary of the State Board of Health.——Dr. John C. Culley, Jackson, captain, M.C., N.G., Miss., has resigned.——Dr. W. S. Leathers, University, Director of Public Health and Sanitation, is to address the Health Conference of County and Municipal Officers of the State of Tennessee which meets in Nashville, April 2-4, and also the Southern Educational Conference, which meets in Nashville later in April.

NEW YORK

Sanatorium Incorporated.—A certificate of incorporation has been filed by the Medford Tuberculosis Sanatorium for Working Men and Women of Brookhaven.

New Hospital Soon Ready.—The new building for the German Deaconess Hospital, Buffalo, is nearing completion and will be ready for occupancy not later than August 1.

City Hospital Relief Fund Grows.—The relief fund for the three city hospitals of Syracuse has now reached $175,000, leaving only $25,000 to be subscribed to make up the amount required.

College Buys Site for Dispensary.—Dean John L. Heffron, of the Syracuse University College of Medicine, announces that the free dispensary to be established in connection with the college will be located on East Fayette Street, adjoining the college, where a site has been bought.

Appropriation for Tuberculosis Ward.—The supervisors of Erie County, at a recent meeting, voted to reorganize the tuberculosis ward of the Erie County Hospital, at an estimated cost of $2,940. The new ward will be known as the tuberculosis department and will be in charge of an executive physician and six attending physicians, who will serve without pay.

Personal.—Dr. George W. Beach, Binghamton, has assumed his duties as assistant superintendent of the Iowa State Sanatorium, Oakdale.——Dr. W. M. Wells is reported to be seriously ill at his home in Fulton.——Dr. L. A. Walker, Rochester, who was operated on for appendicitis late in February, is convalescent and has been removed from the General Hospital to his home.——Dr. Charles S. Meahl, Buffalo, while examining a patient as to his sanity, was viciously attacked by the patient, but fortunately escaped injury.

Health Exhibit Board Named.—The governor has appointed an honorary committee to represent New York State in preparing a public health exhibit in connection with the Fifteenth International Congress on Hygiene and Demography: Drs. Henry L. K. Shaw, Albany; Eugene H. Porter, state commissioner of health, and Drs. Joseph D. Bryant, Luther H. Gulick and Edward T. Devine, New York City.

Mental Hygiene.—A meeting was held in the rooms of the Rochester Chamber of Commerce, March 14, for the purpose of organizing the Monroe County Committee on Mental Hygiene. One of the first activities of the committee was the promotion of a public lecture on March 28 by Dr. Smith Ely Jelliffe, New York City, on "The Causes of Insanity," under the auspices of the Monroe County Medical Association.

Horton Bill Passed.—The Horton bill, which allows Buffalo to spend $300,000 for a tuberculosis hospital, has been passed by the assembly.

New York City

New Italian Hospital.—The Italian Benevolent Society Institute has filed plans for remodeling the buildings at 615 to 619 East Eighty-Third street for hospital purposes.

To Enlarge Mount Sinai Hospital.—This hospital has acquired a five-story flat house on East Ninety-Ninth Street adjoining the properties purchased a short time ago. The hospital will erect a new pathologic laboratory on this site.

New Health Officer Asks Appropriation.—Dr. Joseph J. O'Connell, Brooklyn, the recently appointed Health Officer of the Port of New York, has asked for an appropriation of $387,000, for improvements in the equipment of the quarantine station at Hoffman's Island and the contagious disease hospital on Swinburne Island. He asks for a modern pathologic and bacteriologic laboratory to cost $42,000, $10,000 of which is for equipment. Increased dormitory accommodations are badly needed. It is said that last year, 1,400 persons were crowded into quarters which furnished accommodation for only 800.

Clinic Physicians to Make Visits.—The Manhattan East Side Tuberculosis Clinic, and the West Side Manhattan Clinic, each of which has a branch registration office, have been reorganized and will try several new procedures, among them the visiting by the clinic physician of patients too feeble to attend the clinic, and cooperation with the social and charitable workers in the district. The chief end in view is unification of the clinic and district work. Should the experiment prove successful and yield better results, the new system will gradually be introduced throughout the city. All clinic physicians will then be required to make visits at the homes of patients and to examine suspected cases of tuberculosis refusing to come to the clinic.

Personal.—Dr. James R. Hayden was operated on recently for appendicitis.——Dr. and Mrs. George Jacoby have sailed for Europe.——Dr. Charles G. O'Connor, Brooklyn, has been reinstated as a medical inspector by the Health Department.——Dr. Silas C. Blaisdell, Brooklyn, chief surgeon of the Eastern District Hospital, gave a complimentary dinner to the medical staff of the institution, in celebration of his thirtieth anniversary as a practitioner of medicine, and the last speaker of the evening, Dr. T. L. Vosseler, Brooklyn, presented to the host a silver loving-cup which bore the inscription: "Presented to Dr. S. C. Blaisdell by the visiting staff of the Brooklyn Eastern District Hospital and Dispensary as a token of affection and esteem and to commemorate the thirtieth anniversary of his entrance in the practice of medicine, March 12, 1912."——Dr. Geza Kremer has been appointed admitting physician to the Tuberculosis Preventorium for Children.

OHIO

New Society Organized.—Mercer County Medical Society met to organize at Celina, March 8, and elected Dr. G. J. C. Wintermute, president; Dr. Frank Ayers, vice-president; Dr. D. H. Richardson, secretary and delegate to the state association; Dr. H. J. Cordier, treasurer, and Dr. W. C. Stubbs, censor, all of Celina.

Penalty for Violators of Babcock Test.—The Ohio Dairy and Food Commissioner, Columbus, calls attention to all buyers and sellers of milk and cream, who are using the Babcock test to determine the value of butter fats, to section 12,724 of the General Code, which reads that "Whoever, at a cheese factory, creamery, condensed milk factory or other place where milk is tested for quality or value, manipulates, underreads or overreads the Babcock test or any other contrivance used for determining the quality or value of milk or cream, or

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makes a false determination by the Babcock test or otherwise, shall be fined not less than $25 nor more than $100."

Personal.—Drs. A. Ravogli, Cincinnati, and Charles M. Harpster, Toledo, sailed for Europe, March 20, to attend the International Congress on Syphilis, which meets in Rome April 8.——Dr. Alexander S. McCormick, Akron, had a narrow escape from death, when his automobile was struck by a freight train at Barberton, March 8. Dr. McCormick's hand was badly cut and his knee bruised.——Dr. F. G. Leonard, Cleveland, has been appointed physician in charge of the municipal tuberculosis sanatorium, vice Dr. V. R. Brooks, resigned.——Dr. Andrew W. Prout, Columbus, sailed for Europe, March 16.——Dr. Hugo Maetke, Dayton, sustained painful injuries in an automobile accident, March 6.

PENNSYLVANIA

New Officers.—Woman's Medical Society of Western Pennsylvania, February 27: president, Dr. Amelia Dranga, Pittsburgh; secretary Dr. Mary Jones, Glenshaw.

Appropriation for Sanatorium.—At a meeting of the commissioners of Berks County, March 7, a motion was passed appropriating $1,000 to the Berks County Tuberculosis Society to help defray the cost of maintenance of the Neversink Mountain Sanatorium.

State Hospital Report.—The tenth annual report of the Scranton State Hospital shows that 1,290 surgical cases, 937 medical cases and 177 special cases were treated during the year, a total of 2,404, and that of these, 2,021 were residents of Lackawanna County.

New Hospital.—At a recent meeting of the Board of Trustees of the Dubois Hospital Association and the State Board of Charities, it was decided to begin active preparations for the building of a new hospital. Ground has already been purchased for the new building and the board will give this ground together with an appropriation of $10,000 to the association. The title of the institution will be held by the Sisters of Mercy of Titusville.

New Dispensary.—The Tuberculosis League of Pittsburgh has opened in connection with its work a new dispensary on the South Side. The object of the dispensary is the treatment and care of babies and children for the prevention of diseases and the production of immunity. The league has apparently felt for some time that money could be better spent in the prevention of tuberculosis before money had been spent in educating and caring for those that were to suffer from tuberculosis during early adult life. The territory of the South Side is sharply circumscribed by the Monongahela River and the South Hills, and it is hoped that in five or ten years definite results will have been achieved which will prove the value of this plan of approaching the tuberculosis problem. Dr. William Charles White is the medical director of this work, and Dr. H. C. George is in active charge of the dispensary.

Personal.—Dr. and Mrs. Robert Dunlop, Pittsburgh, have started on their return to China, where Dr. Dunlop is a medical missionary.——Dr. John R. Borland, Franklin, was struck by a trolley car, March 6, fracturing his right leg, clavicle and a rib.——Dr. D. R. Beaver, Conshohocken, had a narrow escape from being crushed by a trolley car, while driving in Morristown. His carriage was wrecked and he sustained severe cuts and bruises of the head and face.——Dr. W. H. Seibert, Steelton, slipped and fell from a trolley car, March 4, but fortunately escaped serious injury.——Dr. George F. Potteiger, Hamburg, has been promoted to surgeon, M.C., N.G., Pa., with the rank of major and has been assigned to the Fourth Infantry.——Dr. W. H. Ammarell, Reading, is ill. in Reading Hospital.——Dr. J. B. Siggins has been elected mayor of Oil City.——Dr. H. H. Penrod, Johnstown, while making a professional call in Morrellville, February 27, slipped on the ice and sustained a slight concussion of the brain.

Philadelphia

Ophthalmologic Society Dinner.—The L. Webster Fox Ophthalmological Society, composed of students of the Medico-Chirurgical College of Philadelphia, were the guests of Dr. Fox at a dinner, March 9.

Typhoid in City Water.—Reports of the bacterial tests of the water supply during the period following the breaking up of the ice have been forwarded to the bureau of health and show that colon bacilli were present in the water from the Torresdale, Queen Lane and Belmont filtration plants.

Silver Jubilee of Society.—At the twenty-fifth reunion of the William Pepper Medical Society of the University of Pennsylvania, March 7, Dr. George Norris was toastmaster and addresses were made by Drs. Alfred Stengel, R. C. Norris and B. F. Stahl, Philadelphia, and by Dr. Joseph Bloodgood, Baltimore.

Ships Detained at Quarantine.—The British bark *Brilliant* from Bombay reached the quarantine station below Philadelphia, March 17, with two members of the crew dead and six others ill with well developed cases of beriberi.——The steamship *Rhein* spent ten hours in quarantine because of a supposed case of small-pox, which was later shown to be chicken-pox.

New Public Bath Planned.—The Public Baths Association, which at a nominal charge provides hot and cold water baths and laundry centers for the poor in various sections of the city, is about to open a new bath house at 1203-1205 Germantown Ave. Toward the estimated cost ($25,000) of the structure, $18,000 has already been raised by voluntary subscriptions. The association's fiscal statement shows that the total receipts last year were $18,067, and the expenses $17,931.

Personal.—Dr. William H. Hutt, Philadelphia, has been designated by the Department of State as a delegate to the Seventh International Congress on Tuberculosis, to be held in Rome in April next.——Dr. J. William White has been reappointed a member of the Fairmount Park Commission.——Dr. Arthur Jackson Brewe sailed for Egypt, March 2, and Dr. S. Weir Mitchell for Bermuda, March 9. Dr. Burton Chance has been appointed ophthalmic surgeon and Dr. Archibald G. Thomson consulting ophthalmic surgeon to the Pennsylvania Railroad Company.

Baby Show Planned.—Plans for a baby show to be held May 18 to 26 to demonstrate what science is doing for the prevention of infant mortality, were made public by Dr. Joseph S. Neff, Director of Public Health and Charities, March 9. A communication has been sent to Councils stating that the exhibition will cost $11,000, and asking that the city contribute $5,000 to help defray the expense, the balance to be paid by private subscription. The details of the management are in the hands of committees, of which the following are chairmen: finance, Dr. Lawrence F. Flick; arrangements, Dr. Henry D. Jump; social organization, Alexander M. Wilson; education, Dr. Jesse D. Burke; lectures and demonstrations, Dr. S. M. Hamill; publicity, Dr. William Duffield Robinson, and procuring exhibits, Dr. Charles A. Fife.

To Investigate Blockley Abuses.—As the result of a speech made by Alexander M. Wilson, assistant director of health and charities, at the City Club several weeks ago, one hundred business and professional men have been requested to become members of a proposed Committee on Municipal Charities, to investigate municipal institutions for the purpose of correcting abuses. The committee on organization comprises Dr. J. H. Musser, Max Herzberg, John S. Newbold, George Vaux, Jr., Walter G. Smith, John Wanamaker, Dr. George Woodward and B. Franklin Pepper. It is the desire of the projectors of the movement to devise a comprehensive plan by which proper quarters will be provided for the insane and indigent wards of the city and that the present system be overturned and succeeded by methods that will end scandals. Bromley Wharton, general agent and secretary of the State Board of Charities, has written Assistant Director Wilson, commending him for his zeal and energy and offering the cooperation of the state board.

GENERAL

Public Health Officials to Meet.—The fifth annual meeting of the Lake Michigan Sanitary Association will be held in Hammond, Ind., April 4, and will be attended by public health officials and sanitary experts from the four states bordering on Lake Michigan.

Important Organizations to Meet in Philadelphia.—The International Association of Medical Museums will meet at the University of Pennsylvania, Philadelphia, April 4, and the American Association of Pathologists and Bacteriologists at the same place, April 5 and 6.

Asks Appropriation for Federal Exhibit.—Surgeon General Rupert Blue, U. S. P. H. and M.-H. Service, through the Treasury Department, has asked Congress to appropriate $51,510 for federal exhibits at the Fifteenth International Congress on Hygiene and Demography, to be held in Washington in September.

Bequests and Donations.—The following bequests and donations have recently been noted:

White Haven Sanatorium for Consumptives, $5,000; Mercer Home for Invalid Women, Atlantic City, N. J., $2,000; Home for Incurables, Philadelphia, $2,000, by the late Louise M. Spear.

German Hospital, Philadelphia, a contingent bequest of $2,000, by the late Emilie Schwarz.

University Hospital and Gynecean Hospital, Philadelphia, $10,000 each, by the late Mrs. Joseph Drexel.

Investigation on Ozena.—At the meeting of the third International Laryngologic Congress held in Berlin, September, 1911, it was resolved that a universal investigation on ozena should be made and the full report be presented at the next Congress, to be held in Copenhagen, Denmark. Laryngologists were appointed to assume charge of these investigations for their respective countries. Dr. Emil Mayer, New York City, represents the United States.

Wants Statistics Regarding Anesthesia.—Dr. James T. Gwathmey, 40 East Forty-First street, New York City, is sending out circulars in the endeavor to obtain statistics regarding anesthesia, which will assist in making the proper deductions regarding the various anesthetics, apparatus for anesthetics, etc. Circulars with blanks to be filled out have been sent to every hospital in the United States, and Dr. Gwathmey asks that the information be returned not later than April 1.

Surgeons of Pacific Northwest Organize.—On March 9 a meeting was held in Portland, attended by surgeons from Seattle, Tacoma, Spokane, Portland, Victoria and Vancouver, at which it was decided to organize the North Pacific Surgical Association, with the membership limited to sixty. The object of the association is the cultivation of the art and science of surgery; the uplift of the medical profession; the promotion of the highest ethical standards in the practice of surgery, and the deprecation of secret fee division between physician and surgeon. The following officers were elected: president, Dr. Kenneth A. J. Mackenzie, Portland; vice-presidents, Drs. Meredith Jones, Victoria, B. C., and C. W. Sharples, Seattle; secretary-treasurer, Dr. Otis B. Wight, Portland; recorder, Dr. J. M. Neff, Spokane; and councilors, Drs. Alfred Raymond, Seattle; J. R. Yocom, Tacoma, and T. L. Catterson, Spokane.

Sanitary Regulations for Railroads.—The Northwestern Sanitary Association, consisting of representatives of the state boards of health and the railroad commissions of Minnesota, North Dakota, Montana, Idaho and Washington, and the railroads traversing these states, met in Helena, March 8, and organized the Northwestern Sanitary Association. The object of the meeting is to codify and make uniform the railroad sanitary regulations in the states named. B. T. Stanton of the Montana Railroad Commission was made president and Dr. T. D. Tuttle, Helena, secretary of the state board of health of Montana, secretary. The association decided to ask every state board of health represented to prohibit the use of common drinking-cups in trains and in stations, and to ask the railroads to discontinue the sale of fruits, nuts, etc., in trains, as such sales are believed to be detrimental to the health of the public.

Needs of the Navy Medical Corps.—In the recent hearing before the house naval committee, Surgeon General Stokes stated that the disability of the Navy had fallen from 5.21 in 1905 to 4.43 in 1911. The Medical Corps of the Navy is so restricted in the matter of surgical dressings that it could not provide one dressing for 10 per cent. of the possible wounded in a naval battle. There are forty-seven vacancies in the Medical Corps and the conditions are not encouraging, as it has no flag rank and as promotion is much slower than in the line. He advocated the establishment of a Medical Reserve Corps and stated that his plan was to charter large freight carriers, each capable of accommodating at least one thousand wounded. One of these transports would be assigned to each division of four battleships, and on this officers of the Medical Reserve Corps would serve. These transports would take the wounded to a sanitary base, two of which are planned—one at Norfolk, Va., the other at Honolulu, H. I.

FOREIGN

Changes in the Obstétrique and the St. Petersburg Wochenschrift.—The editors of the *Obstétrique* wish to emphasize that gynecology is included in its scope, and hence they enter on the seventeenth year of its publication by calling it the *Archives Mensuelles d'Obstétrique et de Gynécologie.*——The *St. Petersburg. Med. Wochenschrift* at the close of its thirty-sixth year, changes to a fortnightly with the name, the *St. Petersburg. Med. Zeitschrift.* This journal is the organ of the German-speaking physicians in Russia, and has always made a practice of publishing systematically monthly lists with brief reviews of the contents of over a dozen of the leading Russian medical journals. Both the above exchanges are listed regularly in our Current Foreign Literature Department.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, March 9, 1912.

The National Insurance Act

The government has received a severe rebuff by the loss of one of the Manchester seats at a by-election. The center of the cotton trade is a great free-trade stronghold and if the election had been fought on this issue it is certain that the seat would not have been lost. But the main issue was the insurance act, which is very unpopular, not only with the medical profession, but with certain other sections of the community, such as clerks, who think that the burden imposed by it outweighs the advantages. The representative meeting of the British Medical Association has formulated demands far in excess of the capitation fee of $1.50 for medical attendance and drugs suggested by the government. A minimum capitation fee of $1.75, which is not to include drugs, is demanded, or, where the capitation is not adopted and payment for work done is given, 60 cents a visit, with a wage limit of $10 a week. The following extras are not to be included but paid for separately: miscarriages; vaccinations; fractures; dislocations; consultations; anesthetics (general and local); night calls between 8 p. m. and 8 a. m.; special visits (that is, visits made in response to and on the same day as calls received after 10 a. m., or made on Sundays at the patient's desire); certificates and reports; illnesses, the consequence of personal misconduct; illnesses arising from confinement and miscarriage within one month; operations requiring local or general anesthesia; operative dentistry; special examinations, for example, *x*-rays, bacteriology, etc., lunacy certificates; examinations, court attendances, etc., mileage; drugs, cod-liver oil, linseed meal, leeches, serum, oxygen, etc.; bottles, jars, dressings, bandages (except for first dressings). These terms are much more favorable to the profession than those at present obtained from friendly societies, which pay capitation fees of about $1 for medical attendance and drugs, including many of the "extras" above specified. One effect of the act is greatly to increase the membership of these societies, which at present include a large proportion of the men of the working class. Many physicians have contracted to attend the members of the friendly societies at this low rate and have no power to prevent the increase of membership resulting from the act. For many years the British Medical Association has struggled in vain to improve the conditions of contract practice, but the difficulty has been that physicians could be easily obtained to undertake the work at the societies' terms. The association has succeeded in bringing practically the whole profession into line to resist the act. Unless the further problem is solved of bringing it into line to resist the terms of the friendly societies its efforts will, to a large extent, be nullified.

The Treatment of Cancer

At the annual meeting of the governors of the Cancer Hospital the general committee reported that the most prominent feature of the year's work had been the completion of the cancer research institute. In the electrical and radiotherapeutic department (for which a new building will be ready about next May) they had secured a relatively large supply of radium and one or two advanced cases showed a slight improvement under its treatment.

The Great Coal Strike

The complete stoppage of coal mining, in which a million persons are employed, if continued threatens a national disaster comparable only to a great war. The railway companies have curtailed the service of trains and the sanitary services and water-supplies are already beginning to be interfered with. Even the hospitals are affected. In some of them fires have been discontinued in the nurses' sitting-rooms and warm water is no longer supplied for washing. In the wards economy in the use of coal is being carried out.

The London School of Tropical Medicine

The London School of Tropical Medicine, which was founded thirteen years ago, has been of great service to tropical medicine, both in promoting investigations and in training colonial doctors. Buildings equipped with the latest scientific appliances, a library and museum have been erected at a cost of $225,000. Connected with the school is the Seamen's Hospital, in which fifty beds are devoted to tropical diseases. The annual expenditure is $15,000, which is met nearly entirely by students' fees. The number of these has steadily and satisfactorily increased: in 1900 there were seventy-five stu-

dents; in 1911, 159. During its existence the school has trained 13,000 students. They come from all parts of the world—the European continent, the United States, China, Japan, India, etc.—as well as from this country and its colonies. Nearly 500 physicians, who have passed into the service of the Dominions and the Colonies, have been trained here. Many colonial officials who have contracted tropical diseases abroad have been treated in the hospital; as many as forty have been treated in the last two years.

Discontent of the Native Doctors in India

In India most of the important civil medical posts under government are held by the officers of the Indian Medical Service (i. e., the Indian army), who are generally Europeans. As a result of the education on western lines of many native physicians, an outcry has been raised that the system is unfair to native practitioners and is stopping the development of independent medical practice. A certain number of these posts are held by the Eurasians or natives, and it is difficult to see how the government can alter the present system, which provides a large reserve of European physicians for the medical service of the Indian army in case of war. It has been suggested that in such a contingency any number of physicians could be obtained at short notice, but to this there is the serious objection, that for service with Indian troops men are required with a knowledge of their language, customs, etc.

First Red Cross Ship for British Navy

A new departure has been made in the British navy in the provision of its first hospital ship. The new vessel will be what is called a belligerent hospital ship—that is, she will belong to a state, and not to a private society, and in case of war will be subject to special conditions, having an official commission notified to the Powers. She will be painted white, with a green horizontal band, about 5 feet wide, and will fly the Red Cross, as well as the national flag. Her construction will be welcomed by all nations, because under the convention she is to assist all belligerents independent of their nationality. The belligerents will have the right to control and visit such ships, to direct their course, and even to define it if important circumstances require it.

The new vessel will be fitted for work both in peace and war. She may accompany the fleet to receive severe cases of illness, especially infectious cases, and convey them to port, and will have every necessary instrument for surgical operations. In war time she will have duties which can scarcely be appreciated or measured without war experience. The sick-bays of war ships, and the places laid out for the reception of the wounded, will by no means meet the demands. The vessel will have accommodation for 260 patients in time of peace, and for 330 during the operations of war, and the standing staff will include eight medical officers, four male nurses and a dispenser. The ship will have a displacement of 5,000 tons, a speed of about fourteen knots, and will be propelled by turbine engines. The furniture of the operating-rooms will include all the results of the latest experience of hospital practice, while in lighting and ventilation she will be admirably adapted for the work required of her. There will be isolation wards for infectious cases, a complete equipment for *x*-ray examinations, bacteriologic tests, optical practice and dispensary work. As in the sick-bays of modern war ships, the cots will swing, and be of the latest type. Special arrangements will also be made for the accommodation of patients suffering from severe fractures and other injuries. The value of such a vessel has been shown by the work of the hospital ship *Maine*, and by that of vessels of this class for Japan in the late war.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, March 1, 1912.

Reform of Medical Examinations

The Superior Commission of Medical Studies, the formation of which I mentioned in a previous letter (THE JOURNAL, Feb. 24, 1912, p. 568) has decided on the introduction of physicians, surgeons and obstetricians of the hospitals in the clinical juries for final medical examinations. It has voted to forbid a student to continue his course if he has failed four times on the same examination. The commission decided on the introduction in one of the yearly examinations of the subject of stomatology. As for the final clinical examination, the commission decided that only two or three patients should be examined at each examination, one of whom should be a patient with a special disease of the eyes, the ears, the nose, the larynx, the skin or a venereal disease. The candidate who fails will be obliged to spend four months at the hospital before presenting himself again for the same examination. As for the doctor's thesis, the commission believes that its suppression might place us at a disadvantage with relation to the foreign schools where the thesis still exists. The suggestion was made that only certain theses should be judged worthy of being printed, but this would be to create indirectly doctors of the first and second classes. Therefore, the thesis has been maintained *in statu quo*.

Cheap Dwellings

The constant and alarming increase of rents in recent years, especially among small apartments, is a subject of great interest in Paris. The population has increased from 2,660,559 inhabitants in 1901 to 2,846,986 inhabitants in 1911. The number of apartments at $100 (500 francs) and less has indeed increased by 45,252 during the period of from 1901 to 1911, but there are constantly fewer small apartments available. Thus in 1899 there were vacant in Paris 26,226 apartments for less than $100; to-day there are only about 3,600 to let. There is danger that the demand may exceed the supply and grounds for new buildings are growing rare.

M. Henri Rousselle in making the report for the Public Charities before the municipal council emphasized the urgent necessity of meeting this crisis with regard to small apartments. He mentioned that the law allowed the Public Charities to devote a large proportion of its funds to the building of cheap dwellings, on the ground that to assure to families of the working classes hygienic habitations is to contribute directly to the combating of tuberculosis, which makes such ravages among them. A considerable sum has already been and is being employed in the construction of economical dwellings, but, according to the report, more is demanded.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Feb. 23, 1912.

Phthisis in the French and German Armies

In the discussion of the French senate on the army budget, attention was called to the fact that in the French army 5.4 per cent. of the soldiers acquire tuberculosis, while in the German army only 1.8 per cent. are affected by the same disease. In 1907, 5,382 men were dismissed from the French army on account of tuberculosis. The critic sought to show that the reason for this regrettable difference lay in the inferior health of those who enlisted and in the greater care which Germany gives to the cure of the tuberculous. In Germany there are thirteen convalescent homes for tuberculous soldiers, while in France not a single one as yet has been established. On the other hand, the minister of war claimed that in France the statistics of sickness are more strictly kept than in Germany and other countries. A claim of this sort, which the minister of war indeed surely made on the spur of the moment, needs no statistical refutation, for with any unprejudiced person there cannot be the slightest doubt that in Germany the army statistics are kept with at least the same care as in France. It may be that the French minister of war was not provided with a sufficient knowledge of the facts to give a judgment on this entire matter.

Warning Against Methyl Alcohol in External Application

The circumstance that lately some cases have been ascertained in which injury to health has been occasioned by the external application of remedies in which methyl alcohol was present, e. g., French brandy and tincture of myrrh, has given the chief of police of Berlin occasion to warn against the use of methyl alcohol in cosmetic remedies and external medicinal applications. Those who violate this provision are liable in future to be prosecuted not only for fraud but, if occasion arises, for personal injury.

Improvement of Dwellings in Berlin

As in most large cities so also in Berlin the tenement question is a serious one. As has been shown there live in Berlin and its suburbs 600,000 people in dwellings in which each room is occupied by five or more persons. In order to secure improvement in this direction and to establish easily accessible parks and playgrounds, a society has been formed under the leadership of Dernburg, the former state secretary in the imperial colonial office. At the initial meeting a resolution was passed that the formation of commodious building plans for sanitary small dwellings, cheap transportation and easily accessible parks and playgrounds are indispensable for the future of the metropolis and the health of the rising generation.

Miscellany

Resemblances of Plant and Tree Cancer to Human Cancer

A plant affection known as crown-gall sometimes does serious injury to forest trees, fruit trees and shrubs, such as oaks, almonds, peaches, raspberries, grapes and roses. E. F. Smith (*Science*, Feb. 2, 1912) attempts to show a resemblance between this plant neoplasm and malignant human tumors. He has published several papers on this subject, and believes that we have in the study of these particular plant overgrowths a key to unlock the whole cancer situation. He says that when he first called the attention of the members of the American Association for Cancer Research to crown-gall as a true tumor, they maintained that it was evidently a granuloma. As evidence that this theory is not correct he shows that in the granulomas it is the parasite causing the disease which migrates and causes the metastases. In cancer it is the cancer cell itself which migrates; i. e., some of the body cells which under some unknown stimulation have been taken out of the physical control of the body and have become, as it were, parasites on their fellow cells. Secondary tumors are derived from primary cancer tumors in two ways. The primary tumor growing peripherally sends out roots or strands which bore their way through normal tissues sometimes for long distances, developing from these strands secondary tumors. In a second method of metastasis small groups of cancer cells are dislodged from the parent tumor and are carried in the blood-stream or lymphatics to develop secondary tumors where they lodge. Having found no parasite in the cancer cells, a majority of animal pathologists have given up the idea that cancer is of parasitic origin and have adopted the theory of Cohnheim of embryonal rests. But Smith says that research workers on cancer are now generally agreed that there are phenomena connected with cancer which cannot be explained by Cohnheim's theory that cancers are due to the later development of small fragments of tissue cut off from the parent layer during embryonal growth, to be enclosed in other tissues and lie dormant until stimulated into growth. The theory that the cancer cell is itself a parasite (a hypothesis recently restated by Butlin) it would seem must be abandoned in the light of the discovery of Peyton Rous (1911), that sarcoma of chickens may be produced by cancer fluid filtered free from all strains of living cancer cells. This evidence supports Smith's theory that the causative factor must be a living microorganism minute enough to pass through the walls of a Berkefeld filter.

Smith has not found the secondary method of the formation of crown-gall tumors in plants, probably owing to the fact that there is no rapid blood-stream, as in animals, to carry the foreign cells. The first method, however, by the growth of strands in the surrounding tissues, has been found by Smith in plants, and parallels, to his mind, strictly what occurs in malignant animal tumors. Smith has found this in the Paris daisy which had been inoculated with the crown-gall organism and which bore both primary and secondary galls. He found these stranda macroscopically in the primary tumor of 20 per cent. of the plants examined. Subsequently, in experimentally inoculated plants examined microscopically, he was able to find the tumor strand in practically all specimens. A striking fact in confirmation of Smith's contention is that when the primary tumor occurs in the stem and the secondary tumor in the leaf, the structure of the secondary tumor is not that of the leaf in which it is growing but of the stem from which the strand was derived, which is exactly analogous to the finding in metastatic human cancer. Furthermore, experimental tumors produced in the leaves of the Paris daisy by needle-puncture inoculations from tumors in the leaves do not have a stem structure but an irregular epithelioma-like structure derived wholly from the leaves. Bacteriologic studies and experiments with these tumors have convinced Smith that the *Bacterium tumefaciens* is the activating organism in the production of these tumors and he has been able to isolate this organism. His experiments in attempting to produce tumors in animal life (fish) with this organism, while they have given some results which are highly interesting and suggestive, have not been conclusive.

Smith believes, therefore, that we have in crown-galls a striking analogy to what occurs in malignant animal tumors, namely, the cell itself a disturbing force; i. e., an enormous multiplication of certain cells without reference to physiologic needs and in opposition to the best interests of the organism; a non-capsulate tumor, with absence of abscess cavities and of plainly visible parasites; peripheral growth and a well-developed stroma consisting of vessels and fibers; from this primary tumor strands of tumor tissue on which secondary tumors develop, with a tendency to take on the structure of the organ in which the primary tumor develops; complete recovery if all the tumor tissue is extirpated, failure if it is not; in some cases spontaneous recovery. The chief difference is that the causative organism of cancer has not been discovered. The experience of Smith, however, as set forth in his article, in identifying, culturing and proving the causative relation of the *B. tumefaciens* to the cancer-like tumors of plants may furnish valuable suggestions in the search for the cause of human cancer.

The Addition of Physical Training in the New York Schools.—The Department of Education of the City of New York has established in the high schools physical training as one of the required subjects of the course. The department is under the charge of Dr. C. Ward Crampton as director of physical training. When any pupil applies for a modification of the gymnastic work, or an excuse from part of it, he is given a letter to his physician, which states that all the pupils are required to take physical training work. The letter informs the physician of the character of this work, which includes, besides heavy exercises, involving considerable vasodilatation and increased heart-rate, a large number of mild exercises which are intended to improve posture, and which do not accelerate the heart or materially affect the blood-pressure. The physician is requested to furnish on an attached blank such details of diagnosis of the condition of the pupil as he deems pertinent, and suggestions as to what class of the work he deems it necessary to modify or eliminate for this particular pupil, and what other precautions should be observed. The blank referred to contains a space for the statement of any physical or developmental defects of the pupil, and the particular ones which the exercises should seek to improve, such, for instance, as drooping head, flat chest, round shoulders, uneven shoulders, flat feet, etc. Certain features of physical training work are set forth in the blank and the physician is asked to specify which should be emphasized, such, for instance, as trunk, leg, back and shoulder exercises for local or general weakness; exercises increasing heart and lung work and development, for somatic undevelopment without organic heart lesion; exercises increasing neuromuscular control and coordination, for cases of motor ineptitude or dulness; recreative exercises, play, etc.; exercises to relieve splanchnic stasis, lowered vascular and enteric tone, in cases of chlorotic tendency, constipation, etc. A list of certain exercises which are contraindicated is also set forth, and they may be directed specifically to be omitted. Other recommendations may also be made by the physician. The system thus allows for its adaptation to the needs of each pupil.

Case of Cavernous Angioma of Face.—The history of a case reported by G. McCallum in the *Australian Medical Journal* Sept. 9, 1911, is interesting. A man, 29 years of age, when about 18, first felt a tingling sensation at left half of upper lip, extending to the ear at that side. Later, the cheek swelled slightly and the trouble was attributed to a decayed tooth in the left upper jaw. This tooth was removed. The swelling continuing to extend, in about a year an attempt was made to remove it. This was given up as hopeless, owing to the bleeding, and the patient was led to understand that there was no hope. The growth continued to extend until within the last two years. For some time after the operation severe bleedings occurred from the nose, with only a few days' interval, and later from the inside of the cheek. The patient had no notion how the condition began. He did not receive

any injury. McCallum found a well-marked swelling of the whole left side of the face, from the lower jaw to the left temporal region, and from the left side of the nose to the left ear. Over the lower jaw there was seen the scar of the operation mentioned above. There was a well-marked projection forward of the eyeball, with total blindness. The tumor itself was diffuse and smooth. A puffiness at the root of the nose was evidently due to enlarged veins, and large veins passed down to the neck from the tumor. In the left temporal region there was a well-marked pulsation, with puffiness. Blue veins could be seen over the anterior portion of tumor. Pulsation was not so marked, and the skin was fairly natural in color. The tumor seemed to occupy all the region occupied by the maxillary bone, and bulged outward from it in all directions. The bones themselves were displaced. The treatment employed consisted in the introduction of magnesium metal in the form of arrows into the tissues. By such treatment chemical changes are produced, which effect the absorption of the metal. The watery constituents of the tissues are reduced to the original elements, oxygen and hydrogen. The gases evolved accumulate around the metal, the oxygen combines with it, and forms a soluble magnesium oxid. The hydrogen is absorbed. The arrows are absorbed in from two to three weeks. Gradual cicatrization follows in the area, with the consequent diminution in size. The treatment is said to be practically painless when done under local anesthesia, and seems to cause no ill effects, local or general. The patient can go about as usual. In McCallum's case the magnesium arrows were dissolved in a few days. He introduced about half a dozen through one opening into different portions of the tumor in a fan-shaped pattern. He was able thus to treat the whole of the tumor except the portions within the mouth and nose, which apparently receded of themselves without any treatment. The number of arrows used was about 100, using six at a time. Although it is five to six years since McCallum treated him, the patient still continues to improve.

Transmission of Typhus by Lice.—Through the work of Nicolle, Comte and Conseil and Anderson and Goldberger in 1909, and of Ricketts and Wilder, working in Mexico, in 1910, it was established that typhus fever was transmitted through the body louse. Goldberger and Anderson, *Public Health Reports*, March 1, 1910, recently conducted some experiments on monkeys which showed that the head louse (*Pediculus capitis*) may also become infected with typhus fever by feeding on patients with that disease and that the disease may be transmitted to monkeys by the injection of an emulsion of crushed lice. The experiments did not prove conclusively that the disease was transmitted by the bite of the head louse, but they believe that it may be so transmitted. This adds another to the list of insect carriers of disease.

Marriages

FRANK BUTLER CLARK, M.D., Red Boiling Springs, Tenn., to Miss Marie Elizabeth Smalling of Nashville, Tenn., February 8.

WILLIAM H. HONOR, M.D., Wyandotte, Mich., to Miss Henrietta E. Adams, Caseville, Mich., at Detroit, March 2.

JAMES KING POLLOCK, M.D., Madison, Ind., to Miss Mabel Morrison Chermside of Staunton, Va., January 29.

THOMAS SMITH ARMSTRONG, M.D., McKeesport, Pa., to Miss Marion Greenwood of Gardner, Mass., March 9.

HENRY WELLMAN EMILE WALTHER, M.D., to Miss Lilian Helen Cormier, both of New Orleans, March 12.

WILLIAM AUDA VEE CASH, M.D., Abilene, Tex., to Mrs. Frances Wells of Sweetwater, Tex., March 8.

GILBERT JOSHUA THOMAS, M.D., Rochester, Minn., to Miss Ethel E. Fuller, at Gardner, Ill., March 6.

VERNON FRANCIS KELLY, M.D., Baltimore, to Miss Laura E. H. Spangler, at Baltimore, March 6.

EDWIN C. SHARP, M.D., Aledo, Okla., to Mrs. Gertrude Parsons of Fort Scott, Kan., March 5.

DELPHOS B. VIRTUE, M.D., Iberia, O., to Miss Edith B. Sawhill of Mansfield, O., March 13.

JAMES GIVENS, M.D., to Miss Grace Frances Wallis, both of Fort Worth, Tex., March 4.

MYRON METZENBAUM, M.D., to Miss Elsa Fuldheim, both of Cleveland, O., March 19.

Deaths

George Edwin Hurst Harmon, M.D. University of Maryland, Baltimore, 1872; a member of the American Medical Association and Association of Military Surgeons of the United States; who entered the United States Navy, Dec. 20, 1873; served on various ships of the Navy for more than seventeen years, and for about the same length of time on shore duty, this service including the command of the Yokohama Naval Hospital and the Naval Medical School Hospital, Washington, and who was retired with the grade of medical director and rank of Rear Admiral, March 5, 1910, on attaining the age of 62 years; died at the home of relatives in Cambridge, Md., March 5, aged 64.

Henry D. Boyden, M.D. Louisville (Ky.) Medical College, 1894; University of Pennsylvania, Philadelphia, 1895; a member of the American Medical Association; formerly president of Hall County (Neb.) Medical Society; surgeon-in-charge of the eye, ear, nose and throat department of St. Francis Hospital, Grand Island; local surgeon of the Burlington System; formerly president of the Nebraska Pharmaceutical Association and a member of the board of examiners; mayor of Grand Island in 1892 and a member of the library board; died in Clarkson Memorial Hospital, Omaha, March 3, from nephritis, aged 59.

Francis J. Stevens, M.D. Albany (N. Y.) Medical College, 1852; formerly a practitioner of Hempstead, N. H., and later a resident of Haverhill, Mass.; at one time representative of the city in the General Court and state coroner; a member of the school committee of Haverhill and for a time editor of a daily paper in that city; died at his home, March 7, from senile debility, aged 88.

Daniel A. La Force, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1863; a member of the Iowa State Medical Society and formerly president of the Wapello County Medical Society; a veteran of the Civil War; formerly mayor of Ottumwa and senator from Wapello County; died at his home in Ottumwa, March 10, from rheumatic endocarditis, aged 74.

Charles Augustus Sheridan, M.D. Bellevue Hospital Medical College, 1885; a member of the American Medical Association and a specialist on diseases of the eye, ear, nose and throat; a member of the board of trustees of St. Francis Home, Oswego, N. Y.; died recently at his home, aged 55. At his funeral a delegation from the Oswego Academy of Medicine acted as escort of honor.

Alverd E. Winchell, M.D. College of Physicians and Surgeons, New York City, 1865; a member of the American Medical Association; the oldest member of the Connecticut State Medical Society; for fourteen years a member of the New Haven (Conn.) Board of Health and for several terms its president; died at his home, March 6, from pneumonia, aged 80.

Edward Henry Kelly, M.D. University of Michigan, Ann Arbor, 1869; a member of the American Medical Association; and formerly president of the Gogebic County (Mich.) Medical Society; local surgeon of the Wisconsin Central Railroad at Ironwood, Mich.; died at his home in that city, March 8, from heart disease, aged 68.

Walter Joel King, M.D. Denver (Colo.) Homeopathic Medical College, 1897; of Golden; professor of pediatrics in his alma mater; physician to the State Industrial School for Boys, and a member of the staff of the Denver Homeopathic Hospital; died in Park Avenue Hospital, Denver, February 28, from nephritis, aged 38.

Edwin Orlando Boardman, M.D. Rush Medical College, 1878; formerly a member of the American Medical Association; organizer and first president of the Dawson County (Neb.) Medical Society; for twenty years a practitioner of Overton; died at his home in Portland, March 11, from heart disease, aged 56.

Samuel A. Jones, M.D. Homeopathic Medical College of Pennsylvania, Philadelphia, 1860; Homeopathic Medical College of Missouri, St. Louis, 1860; formerly dean of the University of Michigan Homeopathic College, Ann Arbor; died at his home in that place, March 9, from senile debility, aged 78.

David Little, M.D. College of Physicians and Surgeons, New York City, 1858; a member of the Medical Society of the State of New York; for two years surgeon of the Thirteenth New York Volunteer Infantry during the Civil War; for nearly fifty years a surgeon of Rochester, N. Y.; surgeon and consulting surgeon on the staff of the Rochester City Hospital for more than half a century; health officer of Rochester in 1870 and 1871; died at his home, March 1, aged 78.

Arthur White Thomas, M.D. Syracuse (N. Y.) University, 1895; a member of the American Medical Association and the Rochester Academy of Medicine; died at his home in Rochester, February 29, aged 39. At a meeting of the Rochester Academy of Medicine, March 1, memorial resolutions were adopted.

John Mason Kash, M.D. Kentucky School of Medicine, Louisville, 1889; of Jackson, Ky.; president of the Breathitt County Medical Society and one of the oldest practitioners of Eastern Kentucky; died at the home of his daughter in Winchester, Ky., January 30, from chronic nephritis, aged 75.

Henry Bolivar Dwelle, M.D. New York University, New York City, 1856; surgeon at Benton Barracks, St. Louis, during the Civil War, and a practitioner of that city for fifty-five years; died at his home, March 2, from heart disease, following an attack of influenza, aged 84.

Samuel Martin Teel, M.D. University of Virginia, Charlottesville, 1876; a member of the American Medical Association and a practitioner of Cooper County, Missouri, since 1878; died at his home in Prairie Home, February 27, from pneumonia, following an attack of influenza, aged 61.

William Edward Gilliland, M.D. Washington University, St. Louis, 1870; a member of the Illinois State Medical Society and twice president of the Adams County Medical Society; a pioneer resident of Coatsburg; died at his home, February 28, from cerebral hemorrhage, aged 79.

Michael Lucas Shine, M.D. State University of Iowa, Iowa City, 1887; a member of the American Medical Association and a prominent practitioner of Buchanan County, Iowa; died at his home in Winthrop, March 4, from septicemia, due to an operation wound, aged 53.

Charles B. Converse, M.D. Bellevue Hospital Medical College, 1871; a member of the American Medical Association; a veteran of the Civil War; physician of Hudson County, N. J., since 1876; died in St. Francis Hospital, Jersey City, March 4, from myocarditis, aged 69.

William E. Holmes, M.D. Jefferson Medical College, 1879; a member of the Kentucky State Medical Association; formerly of Utica; died at his home in Owensboro, March 4, from the effects of carbolic acid, self-administered, it is believed, with suicidal intent, aged 55.

Arthur Lee MacKen, M.D. College of Physicians and Surgeons, New York City, 1894; formerly an eye, ear and throat specialist of New York City and a resident of New Brighton, Richmond; died suddenly in Brooklyn, March 7, from cerebral hemorrhage, aged 40.

Winfred Van Deren Blythe, M.D. Western Reserve University, Cleveland, 1910; house physician in the Youngstown (Ohio) City Hospital for a year and later a practitioner of East Youngstown; died in the City Hospital, March 8, from pneumonia, aged 28.

Ludwig Pauly, M.D. Chicago Homeopathic Medical College, 1879; for forty-eight years a practitioner of Milwaukee; of Milwaukee; who was overcome with gas at his home in that city, February 17, died in the Emergency Hospital, from pneumonia, aged 80.

Algernon Sidney Whitaker, M.D. Atlanta (Ga.) Medical College, 1857; surgeon in the Confederate Service during the Civil War; a regularly ordained clergyman of the Baptist Church; died at his home in Biltmore, N. C., February 27, aged 76.

William E. Warner, M.D. National Medical University, Chicago, 1902; clinical instructor in electro-therapeutics at Hahnemann Medical College, who underwent abdominal section last summer, died in Clearwater, Fla., March 3, aged 37.

Thomas A. Scherer, M.D. Jefferson Medical College, 1883; a member of the Medical Society of the State of Pennsylvania and a specialist on diseases of the stomach; died at his home in Catasauqua, March 9, from cardiac hypertrophy, aged 56.

James C. B. Dixon (license, Missouri, 1884); a member of the Missouri State Medical Association and formerly a member of the American Medical Association; died at his home in West Plains, February 22, from senile debility, aged 88.

Tipton Adams Gunn, M.D. Tulane University, New Orleans, 1909; a member of the Medical Society of Virginia and a practitioner of Lorraine; died in the Virginia Hospital, Richmond, March 3, after a surgical operation, aged 27.

Marcus M. Hale, M.D. Rush Medical College, 1870; for forty-one years a practitioner of Wabash County, Ind.; died at his home in Wabash, February 26, from organic heart disease, aged 65.

Thompson Llewellyn B. Brown, M.D. University of Nashville, Tenn., 1892; a member of the Tennessee State Medical Association; died at his home near White House, Tenn., March 2, aged 41.

John Alexander, M.D. Eclectic Medical Institute, Cincinnati, 1885; of Waverly, Ill.; who fell February 28, breaking one of his ribs; died February 29 from the effects of the fall, aged 84.

Arthur Hasley Coward, M.D. Medico-Chirurgical College of Philadelphia, 1905; died at his home in Bradley Beach, N. J., March 5, from accidental asphyxiation from smoke, aged 30.

George W. Moore, M.D. Bennett Medical College, Chicago, 1890; a member of the Kansas Medical Society; died at his home in Gas, March 8, from pneumonia, aged 51.

Edwin S. Ely, M.D. Hering Medical College, Chicago, 1900; a member of the Michigan State Medical Society; died at his home in Bay City, March 2, from nephritis, aged 44.

Joseph Atherton, M.D. University of Pennsylvania, Philadelphia, 1879; a pioneer practitioner of Dexter, N. Mex.; died at his home, February 24, from dropsy, aged 53.

Jay G. Rand, M.D. University and Bellevue Hospital Medical College, 1905; died at his home in Lake Placid, N. Y., February 26, from cerebral hemorrhage.

Alexander Hylan Johnson, M.D. Howard University, Washington, D. C., 1899; of Washington, D. C.; died in the Freedman's Hospital, Washington, March 7.

George Bannerman Maxwell, M.D. Chicago Homeopathic Medical College, 1894; of Attleboro, Mass.; died in Fort Worth, Tex., February 29, aged 51.

William C. Park, M.D. Western Reserve University, Cleveland, 1882; died at his home in New Millport, Pa., March 4, from cerebral hemorrhage, aged 55.

Dresser B. Vincent (license, Mich., 1900, 13 years of practice); died at his home in Coldwater, February 25, from senile debility, aged 85.

Hugh F. Gunn, M.D. Rush Medical College, 1883; a member of the American Medical Association; died at his home in Galena, Ill., March 5.

John P. F. Brunner, M.D. Bellevue Hospital Medical College, 1874; died at his home in Krumsville, Pa., February 23, from influenza, aged 60.

Wray Beattie, M.D. Washington University, St. Louis, 1875; died at his home in Newark, Ohio, February 29, from arteriosclerosis, aged 81.

Joseph Henry Scott, M.D. University of Louisville, Ky., 1853; died at his home in Louisville, February 6, from nephritis, aged 79.

Frank Adolphus Watkins, M.D. University of Minnesota, Minneapolis, 1889; died at his home in Ulster, Pa., February 14, aged 48.

James L. Mason, M.D. University of Tennessee, Nashville, 1900; of Beechgrove, Tenn.; died at his home, March 4, from tuberculosis.

Robert Astley Corbett, M.D. Victoria College, Coburg, Ont., 1860; of Port Hope, Ont.; died at Ocean Park, Cal., January 27, aged 74.

Welcome L. Filkins, M.D. Eclectic Medical College of the City of New York, 1875; died at his home in Albany, February 19.

Francis M. Winningham, M.D. Eclectic Medical Institute, 1875; died at his home in Blythedale, Mo., February 19, aged 65.

N. H. Ellis (license, Texas, 1907); died at his home in Midland, January 20, from epidemic cerebrospinal meningitis, aged 54.

Augusta S. Linderborg Kheiralla, M.D. Hahnemann Medical College, Chicago, 1892; died at her home in Chicago, March 10.

James A. Allen, M.D. Atlanta (Ga.) Medical College, 1882; died at his home in Pine Bluff, Ark., March 4, aged 71.

Alecia A. Flanders, M.D. Hahnemann Medical College, Chicago, 1886; died at her home in Glencoe, Ill., March 8.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

WILEY'S OWN STATEMENT ON RESIGNING

On April 9, 1883, I took the oath of office and entered on the discharge of my duties as Chief of the Bureau of Chemistry, in the Department of Agriculture.

For the past twenty-nine years I have endeavored to discharge these duties according to the dictates of my conscience, the knowledge at my command, and the obligations of my oath.

In retiring from this position after so many years of service it seems fitting that I should state briefly the causes which have led me to this step. Without going into detail respecting these causes, I desire to say that the fundamental one is that I believe I can find opportunity for better and more effective service to the work which is nearest my heart, namely, the pure food and drug propaganda, as a private citizen than I could any longer do in my late position.

In this action I do not intend in any way to reflect on the position which has been taken by my superior officers in regard to the same problems. I accord to them the same right to act in accordance with their convictions, which I claim for myself.

After a quarter of a century of constant discussion and effort the bill regulating interstate and foreign commerce in foods and drugs was enacted into law. Almost from the very beginning of the enforcement of this act I discovered that my point of view in regard to it was fundamentally different from that of my superiors in office. For nearly six years there has been a growing feeling in my mind that these differences were irreconcilable and I have been conscious of an official environment which has been essentially inhospitable. I saw the fundamental principles of the Food and Drugs Act, as they appeared to me, one by one paralyzed or discredited.

It was the plain provision of the act and was fully understood at the time of the enactment, as stated in the law itself, that the Bureau of Chemistry was to examine all samples of suspected foods and drugs to determine whether they were adulterated or misbranded and that if this examination disclosed such facts the matter was to be referred to the courts for decision. Interest after interest, engaged in what the Bureau of Chemistry found to be the manufacture of misbranded or adulterated foods and drugs, made an appeal to escape appearing in court to defend their practices. Various methods were employed to secure this end, many of which were successful. I found that one by one the activities pertaining to the Bureau of Chemistry were restricted and various forms of manipulated food products were withdrawn from its consideration and either referred to other bodies not contemplated by the law or directly relieved from further control. A few of the instances of this kind are well known. Among these may be mentioned the manufacture of so-called whisky from alcohol, colors, and flavors; the addition to food products of benzoic acid and its salts, of sulphurous acid and its salts, of sulphate of copper, of saccharin and of alum; the manufacture of so-called wines from pomace, chemicals, and colors; the floating of oysters often in polluted waters for the purpose of making them look fatter and larger than they really are for the purposes of sale; the selling of moldy, fermented, decomposed and misbranded grains; the offering to the people of glucose under the name of "corn sirup," thus taking a name which rightfully belongs to another product made directly from Indian corn-stalks.

FREE FROM THE SHACKLES

CAN ANOTHER HONEST MAN BE FOUND TO WEAR THEM?

The official toleration and validation of such practices have restricted the activities of the Bureau of Chemistry to a very narrow field. As a result of these restrictions I have been instructed to refrain from stating in any public way my own opinion regarding the effect of these substances on health and this restriction has interfered with my academic freedom of speech on matters relating directly to the public welfare.

These restrictions culminated in the summer of 1911 with false charges of misconduct made against me by colleagues in the Department of Agriculture, which, had it not been for the prompt interference on the part of the President of the United States, to whom I am profoundly grateful, would have led to my forcible separation from the public service. After the President of the United States and a committee of Congress, as a result of a searching investigation, had completely exonerated me from any wrong-doing in this matter, I naturally expected that those who had made these false charges against me would no longer be continued in a position which would make a repetition of such an action possible. The event, however, has not sustained my expectations in this matter. I was still left to come into daily contact with the men who secretly plotted my destruction.

I am now convinced that the freedom which belongs to every private American citizen can be used by me more fruitfully in rallying public opinion to the support of the cause of pure food and drugs than could the limited activity left to me in the position which I have just vacated. I propose to devote

the remainder of my life, with such ability as I may have at my command and with such opportunities as may arise, to the promotion of the principles of civic righteousness and industrial integrity which underlie the Food and Drugs Act, in the hope that it may be administered in the interest of the people at large, instead of that of a comparatively few mercenary manufacturers and dealers. This hope is heightened by my belief that a great majority of manufacturers and dealers in foods and drugs are heartily in sympathy with the views I have held and that these views are endorsed by an overwhelming majority of the press and the citizens of the country.

H. W. WILEY.

"BOOST FOR REXALL"

Most of our readers still have fresh in their mind the series of exposés that appeared in THE JOURNAL,[1] dealing with a cooperative "patent-medicine" concern, known as the American Druggists Syndicate—"A.D.S." This organization, it will be remembered, consists chiefly of druggists who, not content with the profits to be derived from the *sale* of "patent medicines," must needs participate in the profits that come from their *manufacture*.

Very similar to the A.D.S. in scope and methods is another cooperative "patent-medicine" concern, the United Drug Co., whose "patent medicines" are sold under the general trade-marked name "Rexall." Like other "patent medicine" manufacturers, this company has awakened to the commercial possibilities that await the nostrum vender in Great Britain. More stringent state and federal laws governing the sale of "patent medicines" in the United States have caused many of the gentry engaged in this delectable business to seek fields where the "let us alone" policy is carried to a *reductio ad absurdum*. At present, Great Britain is the happy hunting-ground of the American quack or nostrum vender who has found that he is not without honor (and profit) save in his own country. This condition of affairs has been commented on not only in the British medical press but in London *Truth*, that implacable foe of humbug in whatever form it is exhibited. The following article under the title "Boost for Rexall" appeared in *Truth*, Feb. 14, 1912; it will prove, we believe, of more than ordinary interest to our readers:

"There are signs and portents that this country will shortly be in the throes of an invasion. Not the North Sea, but the Atlantic, is the point of danger, and the invader will be armed with a whole battery of powerful weapons forged by the biggest 'pharmaceutical plant' in the United States, which, as every one knows, is the land of big things in the drug line as in everything else. Yankee venders of pills and potions have descended on these islands before, but never in such an alarming array. With the exception of Dr. Munyon, of Munyon's remedies fame, they have mostly come with single articles. In the present instance, however, it is not a matter of the introduction of one or two new 'cures,' but of a hundred or more, and the lot are to be discharged at the public by methods of 'boosting' hitherto undreamt of in the philosophy of our native druggists.

"'Boost for Rexall' will be the inspiring battle-cry of the campaign, for which the plans are now being laid. There is in the United States and Canada an undertaking styled the United Drug Company, whose specialties are 'The Rexall Remedies.' Listen to this:

> "We claim to manufacture a remedy for the cure of every disease human flesh is heir to. Altogether we have about one hundred and fifteen of these remedies.

"That quotation from an interview with Mr. Lewis S. Wandell, the managing director of the company in England, recently published in the *Pharmaceutical Journal*, shows at once that there is no false modesty about Rexall. Rivals may profess to have cures for this, that, or the other disease, but Rexall covers the whole field of human ills. The managing director seems to have been under the mark, though, when he said there were about 115 remedies. The Rexall literature now before me puts the number at 300, but that is for America, and perhaps our ailments are less varied or our tastes simpler over here. One choice sample of this literature is worth quoting:

> "Rexall Orderlies contain a drug the medicinal value of which has not long been recognized. Convinced that this drug was a veritable gem, a treasure of really untold value, because of its beautiful action on the bowels, we decided to give the public the benefit of the splendid action of the newly discovered chemical by putting it on the market in the form of Rexall Orderlies. The result has been very gratifying. Great numbers feel warmly toward us for having put into their hands this reliever of their distress.

"It is noticeable that though Rexall professes to set its face against secret remedies, it does not disclose the ingredients of a number of its concoctions. See, for instance, how the name of this veritable gem, this treasure of untold value, is, like the birth of Mr. Yellowplush, 'wrop in mistry.' Yet it has been whispered to me that the miraculous drug with the beautiful action is one procurable in almost any chemist's shop in this country in the shape of tablets compounded of phenolphthalein! However, I have no desire to pry into secrets of this description. It is sufficient to mention now that, besides such specialties as Rexall Orderlies, Rexall Americanitis Elixir, Rexall Muco-Tone, and Rexall mixtures and lotions (ointments, pills, tablets, hair tonics, tooth powders, and other things too numerous to mention, the company are also manufacturers of confectionery, stationery, perfumery, etc., and dealers in such articles as playing cards and Rexall cheap watches, of which 50,000 are said to have been sold.

"More interesting than the range of the goods is the method in which they are purveyed. In the first place the public are assured that this business is conducted on the strictest moral principles. Rexall itself says so. Its system—again you have its own word for it—'was more than a revolution, it was a new earth' in the drug trade. One of the basic principles was that 'the printed stuff about these preparations should be so truthful as to lean backward rather than make a single exaggerated claim.' In proof of the company's meticulous veracity, the following incident is related:

> "A pretty pile of booklets was on the floor. As I picked up one, I was told the whole edition had been discarded. Why? Simply because in two preparations therein described the words used were too strong. The Cold Tablets were said 'to prevent' colds, whereas they only 'tend' to prevent colds. The Cream of Almonds was carelessly said to 'fill out hollow cheeks,' whereas it only 'tends' to fill them out.
>
> "All that costly edition thrown to the dump because these two claims were left unmodified. When men pay such heed to their words, lest they exaggerate . . .

"This edifying story of Rexall virtue is from a publication which the company has distributed broadcast. The appended extract is from a magazine called *Rexall Ad-Vantages*, which is issued only to employees and stockholders of the company. Dr. Barker was speaking at a meeting of the New York Rexall Club on business matters:

> REVISED LITERATURE—A FRIENDLY TIP
>
> "Discussing the changes made in the United Drug Company's advertising literature *for the purpose of bringing it still more into harmony with state and national laws*, Dr. Barker . . . advised the stockholders to throw away any literature issued prior to the company's revision.

"It would seem from this that the company's conscience, sensitive though it may be, has not been the only stimulus to the throwing of Rexall literature 'on the dump.' Some part of the sacrifice has also been due to more stringent state and national laws. It may be added that the literature of these highly conscientious boosters includes a quotation of an advertisement of their own in *McClure's Magazine*, which is reprinted as though it were an editorial article, and that one of their leaflets states that a certain preparation is 'guaranteed to permanently cure 75 per cent. of all cases' of the disease for which it is offered—a claim which any physician would characterize as preposterous or something worse.

"Another character in which the company holds itself up to admiration is that of an object-lesson in 'exalted cooperation.' Apparently this is because a druggist desiring to retail the wonderful products of the 'pharmaceutical plant' at Boston must first of all buy shares in the company, the amount he is required to invest being calculated in some way on the basis of the population of the place in which he carries on business. Even if he is prepared to make the investment, however, not every druggist is eligible for the privilege of dealing in Rexall—so, at least, one gathers from its own publications. 'Only an apothecary who can stand an exhaustive inquiry as to his professional ethics' is allowed to handle Rexall remedies. Just think of that! Nor is the distinction

1. THE JOURNAL A. M. A., Feb. 10, 1907; Jan. 8, Jan. 22, Feb. 19 and April 9, 1910. All this matter, reprinted in pamphlet form, will be sent on receipt of a stamped addressed envelope.

open to more than one druggist in one place, and the man on whom the choice falls becomes *ipso facto* 'the leading druggist' in that place—Rexall itself says so. 'When you see a sign on a druggist's shop reading "The Rexall Store" it indicates that the proprietor of that store is the leading, most progressive, and dependable druggist in his community.' This is, incessantly and stridently drummed into the heads of the community by means of booklets printed in millions and newspaper advertisements on the most lavish scale. It must be a pleasant experience for the other pharmacists in the same town, especially as they are blandly assured that Rexall has their interests at heart.

"The Rexall profession of friendship for the individual chemist as distinct from his company competitors is one of the queerest features of this American enterprise. To pave the way for its appearance here a party of British pharmacists went to Boston last autumn as the guests of the United Drug Company at the annual 'convention' of its stockholders and agents, of whom there are some 4,000. Mr. R. A. Robinson, ex-president of the Pharmaceutical Society of Great Britain, and four other gentlemen, presumably selected as representative of English pharmacy, were members of the party, and all are said to have been wonderfully impressed with the Rexall methods. Mr. Robinson gave his impressions in an interview, from which I take the following:

> "The Rexall business is run on cooperative lines—there is no cutting, each man's pharmacy becomes a Rexall store and everything is done on the best possible business lines. The point that attracted me most was the desire of the company to help the individual chemist. I found the greatest loyalty and enthusiasm among them. Not a single Rexall retailer thinks of undercutting his neighbor. There is nothing like it in England.

"It seems doubtful whether Mr. Robinson, after all, really grasped the true inwardness of Rexall methods of helping the individual chemist. I have shown already that these methods can hardly be helpful to those who do not come within the sacred circle of agents for the company's elixirs, etc.—that is to say, all but the one chosen retailer in each place. Secondly, individual druggists do not—as I understand—usually consider that their interests are advanced by what are known as 'chain stores' run by a company. Yet the United Drug Company has in the States about fifty of such retail stores, the majority of them having originally been started by Mr. Louis K. Liggett, the genius who founded the Rexall business, as a singular kind of auxiliary to his scheme of 'exalted cooperation.' Then there is the question of price-cutting, on which Mr. Robinson lays so much stress. In September last a Rexall store was opened in Toronto, under the name of Liggett's Store, and a flamboyant page advertisement in a daily paper was largely occupied with lists of drugs, etc., showing the difference between 'our price' and the 'regular price,' the difference being that 'our price' was for many things from 60 to upwards of 100 per cent. below the price charged by private retailers in the same city. Here are three items:

> "Epsom salts. Regular price 10 cents per lb. Our price 4 cents.
> "Boracic acid. Regular price 25 cents per lb. Our price 10 cents.
> "Soda bicarbonate. Regular price 10 cents per lb. Our price 4 cents.

"'Not a single Rexall retailer thinks of undercutting his neighbor.' Innocent Mr. Robinson! Mere undercutting, however, was only one of many devices of this Rexall store. There were free souvenirs for everybody and 25 cents' worth of stationery thrown in as a bonus on every purchase to the amount of $1, while $500 was distributed by means of the liberation of 1,000 toy balloons, each carrying a 'tag' entitling the person who captured it to a gift ranging in value from 25 cents to $10. 'The best possible business lines' is Mr. Robinson's verdict, but all the same imagination boggles at the idea of an ex-president of the Pharmaceutical Society seeking customers in the Brompton Road with the aid of a shower of balloons, each with a money tag attached. Another Rexall agent about the same time was thus advertising a sale of 1,000 jars of Rexall cold cream at 'the regular price of 50 cents.'

> "Every jar contains money—$10 gold piece in one, $5 in another, $1, 50c, 10c, 5c in others. You can't lose, no matter what you get—the cream is of the best; you pay only the regular price of 50c for it and you are bound to get some money in your jar, so that in any event it costs you less than the regular price—and you may get the $10 gold piece

"That at any rate is a Rexall dodge which will be found impracticable here owing to the provisions of the Lottery Acts. However, *Rexall Ad-Vantages* also furnishes particulars of a series of 'something for nothing' selling schemes which can be worked at an actual profit apart from the value of the advertisement.

"Mr. Robinson did not give any details of the proceedings at the annual convention which he attended. This is a pity, because, judging from a report in the *Chemist and Druggist* of September 23, a Rexall convention is not the least remarkable and instructive illustration of Rexall methods. Piety as well as philanthropy plays a part in them. 'The proceedings,' says the report, 'were opened with prayer. Then followed three days of business meetings, at which speakers told of new methods of drawing trade.' There were feasts and entertainments, too, and 'it is safe to say no songs were more popular than the following:'

> *"Tune of 'Yip-I-Addy-I-Aye.'*
> "Boost for Rexall to-day—to-day,
> Boost for Rexall to-day!
> Boost North and South, from Sea to Sea,
> For the United Drug Company.
> Boost for Rexall to-day—to-day,
> Just stand up and holler Hurray! Hurray!
> Boost here and at home,
> Wherever you roam,
> Boost for Rexall to-day.

"Individual chemists must, of course, decide for themselves whether it will be worth their while to attach themselves to the United Drug Company in the dual capacity of shareholders and boosters of Rexall remedies. It may be well for them, however, to bear in mind what Mr. Liggett, the president, said at the 'convention' at Boston in October:

> "We are preparing to open in England as a separate company, composed largely of English people, *but controlled, of course, by this company.*

"If the English business succeeds, the Yankee concern will control the profits; if it does not succeed, the English shareholders will lose their money. There can be little doubt as to the attitude of pharmacists generally toward this strange example of 'exalted cooperation' as it is practiced in America, nor is it by any means certain that the methods of trading described above will commend themselves to the British public. As Mr. Robinson observes, 'There is nothing like it in England,' and a good many people will be of opinion that it is something which we can very well do without."

THE BRANAMAN REMEDY COMPANY

Fraud Order Sustained

The Dr. Branaman Remedy Company, a mail-order medical fake of Kansas City, exploiting a "cure for deafness," against which a fraud order was issued by the Post-Office Department, has received a final knockout blow through a recent decision of the United States circuit court for the western district of Missouri. The company had applied for a preliminary injunction against the postmaster of Kansas City to restrain the enforcement of the fraud order. This was denied by the court. In THE JOURNAL, Nov. 26, 1910, p. 1908, the story of this concern, which is conducted by Dr. G. M. Branaman, its method of exploiting the public with a cure for deafness and the results of an investigation by the Post-Office Department was given at some length.[1] It was the old and familiar falsehood of the great specialist who promised his victims free treatment and special personal attention. The usual symptom-blank was required to be filled out, the stereotyped letters and the ready-made diagnosis were sent the victim, but instead of receiving free treatment, he was required to remit a neat sum for the apparatus and the whole outfit for the treatment of his case. Fraudulent testimonials were furnished and the whole rigmarole of the faker and the quack was gone through with. After investigation by the post-office employees, who took the rôle of patients of the quack concern, the Postmaster-General issued the fraud order. The court, in reviewing the case on the application for the preliminary injunction, taking into consideration the evidence accumulated by the Post-Office Department and such defensive matter as was submitted by the Branaman Remedy Company, held that the evidence not only warranted the making of the fraud order by the Post-Office Department, but amply sustained it. Where a fraud order is issued, in the opinion of the court, the presumption

1. The matter has been reprinted in pamphlet form, price 4 cents.

is in favor of the legality of the action of the Postmaster-General, and a strong showing is necessary to warrant the granting of an injunction. The court further says that the only cases in which courts will disturb a fraud order made by the Postmaster-General are when it is tainted with fraud, absolutely without authority of law, clearly outside of the statute, or, perhaps, clearly, palpably and obviously wrong. In the application for the injunction the complainant in his bill in equity claimed that his business and that of the Branaman Company "is and always had been a lawful one." The court said, "What might otherwise be a legal business or profession may be so conducted as to render it a vehicle of fraud and deception and bring it within the purview of the statutes authorizing the Postmaster-General to refuse the use of the mails in furtherance of schemes to defraud."

An interesting feature of the complainant's bill of equity asking for the restraining order against the Kansas City postmaster was the allegation that the action of the Postmaster-General was the result of a conspiracy involving the American Medical Association, the Jackson County (Mo.) Medical Association and a number of doctors of Kansas City, as well as the attorneys for the government and the United States post-office inspector. This seems to be becoming the favorite defense of the quack, the faker and the nostrum-vender, when they are brought to book for their fraudulent methods—claiming conspiracy with others on the part of the American Medical Association, the great "medical trust," which seeks to destroy a lot of innocent but enterprising gentlemen who are only seeking to benefit the people and incidently to earn an honest dollar. It is gratifying to know that through this deep-laid conspiracy the Branaman Remedy Company has been put out of business for a time—at least, until Branaman turns up again with some similar scheme or with the same old fake under a new guise and name—and that the credulous public has thereby been saved probably thousands of dollars, much suffering and permanent injury.

THOREMEDIN

To the Editor:—A recent issue of THE JOURNAL (March 9, p. 716) contains a severe criticism concerning Thoremedin, which I consider unjust and misleading for many reasons. In this letter I will not go into particulars, but merely wish to correct some of the false impressions which may have been created by your publication among the many physicians all over the country, who have already used Thoremedin with remarkable results and others who might be deterred from using it by reason of the assertions of Dr. Pusey.

For over a year and a half, I have watched the effects from the employment of Thoremedin in the New York Skin and Cancer Hospital and in my private practice where there have been treated over two hundred patients with results which no one could misinterpret; these cases have been watched not only by myself and my own office assistants and the staff at the New York Skin and Cancer Hospital, but also by hundreds of graduate physicians who attended my lectures last year and this, and before whom we have treated these cases week after week. How the remedy acts I do not know, but I am sure that the sulphuric acid is not the most important active agent.

When Thoremedin paste is employed its therapeutic action continues for a considerable time, after any and all acid action has ceased; and where solutions of Thoremedin as weak as 5/100 of 1 per cent. acidity and ointments of 1.5 to 3 per cent. acidity were used, surely the acid cannot explain the therapeutic action of the remedy.

The results obtained with Thoremedin, also in cases of lupus vulgaris and erythematosus, cannot be questioned, as the hundreds of physicians will testify, who have followed the treatments throughout the past eighteen months.

I have not a word to retract of what I have said in my lectures or published in the *Medical Record* and elsewhere.

It is my invariable custom to ascertain the facts before I venture a statement regarding any method of treatment, which custom I have followed also in this case.

I am still using Thoremedin in its various forms with the greatest satisfaction, and expect to continue doing so.

Against Dr. Pusey's theories and statements, which rest on a few irrelevant experiments on metals, chamois leather and healthy skin, and not at all on clinical work, stand the published clinical reports on many actual cases treated by myself and others. I may leave the whole matter to the judgment of the profession at large. Kindly publish this in your next issue.

L. DUNCAN BULKLEY, M.D., New York.

[The above letter was submitted to Dr. Pusey, who replies:]

To the Editor:—The chief burden of my criticism of Thoremedin Paste is that parading it as a "new Thorium remedy," containing "radio-active Thorium," and of secret composition, Squibb has introduced a sulphuric acid caustic paste. Dr. Bulkley makes no comment on its large free sulphuric acid content. In the presence of the fact of 15 per cent. to 35 per cent. free sulphuric acid, to say "How the remedy acts I do not know, but I am sure that the free sulphuric acid is not the most important active agent" is to my mind childish. It is to me a good deal like burning a hole in a man with a hot iron and then saying "What produced this effect on the tissues I do not know, but I am sure it was not the heat. It must have been due to some extraordinary dynamic property in the metal." If that is the sort of reasoning to account for the therapeutic action of remedies then therapeutics is surely on pretty weak ground.

I do not doubt that Dr. Bulkley has obtained clinical results, but I wish they had been published, so far as they were the results of the paste, as results from the application of a strong sulphuric acid paste. As to the character of these results I venture to believe that they have not impressed many other competent observers as favorably as they have Dr. Bulkley. I did not undertake to investigate the Thoremedin ointment or the liquor. If they are what they purport to be, they are dilutions of the paste, i. e., dilute mixtures essentially of sulphuric acid and sulphate of lead, and I am willing to let them go at that. Such preparations will be acid, antiseptic, astringent applications and of some use but of no wonderful potency. Dr. Bulkley says that in "solutions of Thoremedin as weak as 5/100 of 1 per cent. acidity, . . . surely the acid cannot explain the therapeutic action of the remedy." Well the other horn of the dilemma is worse: There is at least five to fifteen times as much sulphuric acid in Thoremedin as there is thorium, so that if the dilution contains only 5/100 per cent. sulphuric acid it contains only 5/500 per cent. to 5/1500 per cent. of thorium. And I take it that no sane man is going to attach much importance to a 1/100 or 1/300 of 1 per cent.—a 1/10000 or 1/30000—dilution of thorium in a local application.

Above I have spoken of Thoremedin as having 15 per cent. to 35 per cent. free sulphuric acid content. As a matter of fact, according to Semerak's admission to me, the stuff has not a fixed formula, although it is heralded as the result of years of painstaking research. For a few days before the publication of my paper, when I pressed Semerak with the fact that the paste contained 35 per cent. sulphuric acid, he confessed to 35 per cent. sulphuric acid in it as it was first put out, but hastened to claim only 14 per cent. free sulphuric acid lately. Of course it makes little real difference what per cent. of free sulphuric acid the paste contains so long as enough is used for the undiluted acid to get at the tissues, but the varying of the formula within four months indicates how uncertain even its originator is of what it should be and how unreliable are secret formulas.

If the experiments I made with the stuff are "irrelevant" I cannot but wonder what "relevant" experiments were made to determine the unknown powers of this sulphuric acid paste before it was applied to the disfigured and the diseased.

W. A. PUSEY, Chicago.

[COMMENT: Dr. Pusey's letter makes it unnecessary for us to comment on the main issue in the correspondence. Our readers may be interested, however, in a matter incidentally referred to by Dr. Bulkley. He speaks of a paper printed in

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the *Medical Record*. This paper was submitted to THE JOURNAL a year ago, and was returned with the following communication from the editor:

"I have read your article on 'The Treatment of Epithelioma, Lupus, etc., with Thorium Paste.' Had this come from any one but you we should probably have sent it back with a brief note to the effect that it was not available. Our reason for this would be that it seems to be advocating a nostrum. You do not state what the preparation is. Further, you say it is not yet on the market. If this is so, what is the use of publishing an article about it? If a doctor who has confidence in you reads your paper he will want to get some of this paste, and he would undoubtedly be vexed to find that it is not obtainable. Suppose it were obtainable, however, the next question is: What is it? Can anybody make it? If so, what are the exact ingredients, and how is it made?"

The letter bears the date of Feb. 28, 1911.—EDITOR.]

Correspondence

A Thirty-Day Rhythm in Apoplexy

To the Editor:—In THE JOURNAL for February 3, p. 330, there appears an article under the catchy title given above. The first paragraph of this article makes it clear that "that type of cerebral hemorrhage which we designate as apoplexy" is to be considered, and in several places further along in the article the fact that cerebral hemorrhage, not embolism or thrombosis (and not cerebral arteriosclerosis with arteriospasm), is the lesion the author is investigating.

From the notes of cases which Dr. Hurst offers, it appears very doubtful whether he was dealing with cases of cerebral hemorrhage at all. Before it becomes profitable to draw on the imagination for the evolution of a theory to explain a fact, the existence of the fact has to be established, and in this first requirement the author of the above article sadly fails. The case notes he offers in proof of his diagnosis are very inadequate to satisfy a reader of the correctness of such diagnosis.

For example, Case 1, a woman over 90 had an indefinite number of attacks of what are assumed to have been cerebral hemorrhage; in twenty-one months that she is under Dr. Hurst's care she has ten of them, some very severe, and yet lives to tell the tale. No symptoms were cited in proof of the nature of the "attacks." Must we accept this as a case of repeated cerebral hemorrhage? Patients 2, 3 and 5 make out no better cases for the diagnosis of cerebral hemorrhage than this first one. Patient 4 might have had a hemorrhage—probably did—and does not show any rhythmic periodicity of attacks, for he had only one. He is classed here, I suppose, because "the nurse notes that there have been periods recurring every month or every two months in which the patient was less well, was restless and irritable."

Of the five cases that we are asked to consider as cases of cerebral hemorrhage, four, or 80 per cent., had multiple attacks within two years, while Starr, among 200 cases of apoplexy including embolism and thrombosis, which show much more often repeated attacks than hemorrhage, had only twenty-two cases, or 11 per cent., with more than one attack.

Were it necessary to analyze this article further in order to show its misleading statements many more holes could be punched in it, but I do not think it necessary to occupy space with a consideration of "theories," "treatment," etc., for, the giant being shown to be a windmill, what need of the valiant knight?

M. SCHULMAN, New York.

[The above was referred to Dr. Hurst, who replies:]

To the Editor:—Dr. Schulman's criticism of my article affords me the opportunity to explain the necessity for some omissions which have been, here and there, misunderstood. Space in THE JOURNAL is far too precious to be trespassed on lightly; for that reason my article, at the first writing some four times as long, was stripped to the barest essentials necessary to report the observations. These observations on apoplexy were limited by the title to the subdivisions of etiology and treatment. Dr. Schulman's letter deals mainly with the subdivision of diagnosis, a matter I designedly excluded. The criticism can probably be answered most satisfactorily to Dr. Schulman by naming some of the symptoms which were considered as justifying a diagnosis of apoplexy. In the case he cites at length (Case 1 in the article), the patient was unconscious, the face cyanosed, respiration stertorous, left arm and leg flaccid, pupils dilated and irresponsive to light, conjugate deviation of head and eyes to the right, cheek flapping with respiration, pulse slow and full, and twenty-four hours later she had but partially regained consciousness. There was not a word of this in my article, and in its absence it is entirely legitimate for my critic to satisfy himself as to the symptoms that would lead me to arrive at a diagnosis of apoplexy. The responsibilities imposed by the practice of medicine are far too grave to justify us in accepting anyone's unsupported word. In this spirit I welcome the criticism.

Dealing seriatim with some of his other points:

1. The "catchy title" was given by the manuscript editor in THE JOURNAL office. I am grateful for the selection of a title infinitely more suitable than my own choice.

2. The phrase "that type of cerebral hemorrhage which we designate apoplexy" was used to exclude matters not germane to the subject, such, for instance, as hemorrhage from traumatism.

3. "Embolism and thrombosis" (presuming that Dr. Schulman means by the latter "arterial thrombosis" and does not confuse it with sinus or venous thrombosis) are in many cases notoriously difficult of diagnosis from cerebral hemorrhage before the post-mortem. Even then, in many cases, they are found to coexist and to be so interwoven as to seem rather fortuitous differences of degree than of kind. Dr. Schulman will recall that cerebral hemorrhage is frequently the result of aneurysm, which itself may be due to embolism or to endarteritis; and that endarteritis is often the precursor of thrombosis.

4. "Cerebral arteriosclerosis with arteriospasm" by influencing blood-pressure may predispose to cerebral hemorrhage, and in such cases must, of course, coexist with it. I wish to make the point that while embolism, arterial thrombosis, or arteriosclerosis with arteriospasm may have existed in the cases I quote (only post-mortem examination can prove that they did not), such existence would not exclude or vitiate by one iota the diagnosis made.

5. For reasons given above "no proof of diagnosis" was offered; matters not offered at all are naturally "inadequately offered."

6. Case 4 was "classed here," not because "the nurse notes, etc.," but because (all available evidence sustaining the diagnosis made by the family physician), the series of blood-pressure readings taken during the period the patient was under my care showed, as stated in the article, the rhythmic variations which were being reported.

7. "Eighty per cent. had multiple attacks." My critic makes an error here. It has escaped his attention that seven cases are mentioned, not five. On second thought he will probably agree that it would be the height of folly to attempt to calculate a percentage rate from seven cases. In general, I may add that, given a certain diseased condition (such as we are considering here) all degrees, from the symptomless minute hemorrhage discovered post mortem, to the most severe, can and do exist; that with increasingly accurate methods of investigation (blood-pressure apparatus, for example) lesser grades which formerly escaped attention are now searched for and found.

It is the unwritten law of our profession that observations seeming to promise any aid in our battle with disease be promptly made common property, rough-hewn and incomplete though they be. If "holes can be punched in" the article, all the more reason for publishing it, so that men with more time, means and ability may weigh it, elaborate it, and correct it to the perfection of truth, which in medicine, as in other sciences, we often see but "dimly, as through a veil." As to the simile of the giant, the windmill and the valiant knight, may I remind the valiant knight who has deigned to couch a lance at my small windmill that on the plain of Monteil, also, it was the knight who was in error; the constructor of the windmill was never accused of mistaking it for a giant.

JULIUS HAROLD HURST, Montecito, Cal.

Abnormal Treatment in Normal Labor

To the Editor:—I think no article has appeared in THE JOURNAL in a year that has done so much good as the one on "The Management of Normal Labor." When I first saw the article, I did not read it, believing it to be a well-selected cull from approved text-books, but when I noticed the subsequent criticisms, I did as thousands of other physicians have done—read it all—and was benefited. It is an article that provokes discussion and brings out clinical facts from personal experience. Perhaps the best way to manage normal labor is to let it alone, but you cannot hold down a job and do that; yet, meddling and continually doing something is as dangerous as a safety razor. Shaving genitals is on the border line of malpractice. I wonder if any physician ever did shave the genital organs and put them in even a relatively aseptic condition? How infrequently do we see even the pubes and vulva shaved without capillary oozing! If there is no oozing, examination with a glass shows sebaceous glands torn open, the epithelium scraped off and the papillary layer in the most favorable condition for infection. Then look at the bayonet bristles that result from cutting off the hair; they will set some patients wild and make all feel uncomfortable, while the constant prickling sets up an ideal dermatitis, favoring infection.

I can scarcely imagine a doctor or nurse shaving the hair from the folds and the anus of any nervous woman in labor with a congested vulva, especially if she is fat.

I would like to see a doctor go into a rural district, or into the factory wards in which there are five or six neighbor women and, perhaps, the mother of the patient—all mothers of large families of children—and watch the doctor strip his patient and go at her with soap and scrub-brush, lather and razor. I want him to be a doctor that has "done" me at some time, so that I do not feel too quick a call of professional duty in pulling him from under.

It is not the hairy or woolly animals, or women, that have puerperal fever. The majority of healthy mothers are those who would not know a vaginal syringe from an atomizer. I feel sure that shaving the genitals of women who are confined would raise the number of infected cases 50 per cent.

In twenty-three years' practice in one city of 8,000 inhabitants, with a thickly settled surrounding country, I have seen but three deaths from infection following normal labor.

J. H. GUINN, Arkansas City, Kan.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

BEEBE'S SERUM IN EXOPHTHALMIC GOITER

To the Editor:—1. Please inform me where I can obtain information concerning the serum used in the treatment of exophthalmic goiter, known, I believe, as the B. B. serum. 2. Is it to be considered as a substitute for operation in some cases? W. K. R.

ANSWER.—1. The serum concerning which our correspondent inquires is probably what is known as the Beebe serum, which can at present be obtained only from Dr. S. P. Beebe, Loomis Laboratory, 414 East 26th St., New York. Dr. Beebe states that several other men are now interested in making it, but that they have not progressed to a sufficient point to be able to furnish the serum except for their own use.

In applying for this serum it is necessary to give complete information in regard to the particular case under treatment. The use of the serum is being guarded in this way so that it shall be applied only in suitable cases. This point is discussed in the Department of Queries and Minor Notes in THE JOURNAL, July 9, 1910, p. 143, and Nov. 12, 1910, p. 1750. These items refer to original articles describing the serum, for example, Feb. 17 and Sept. 1, 1906, and Oct. 5, 1907. Later articles were in the *Archives of Internal Medicine*, November, 1908, and *Annals of Surgery*, December, 1909, and February, 1910.

2. On this point, Dr. Beebe says: "For some cases the serum may be considered a substitute for operation. It must be used in the right type of case and in the right way. More than two thousand patients have been treated with serum; and the results show that 50 per cent. of these patients can be restored to normal health without resorting to operation."

THE PROGNOSIS IN LOW HEMOGLOBIN CONTENT—TALLQVIST'S HEMOGLOBIN SCALE-BOOK

To the Editor:—To decide a controversy, please answer to the following: 1. Can recovery take place after the hemoglobin content of the blood falls to 10 per cent. or lower?

2. Is Tallqvist's hemoglobin scale-book of practical value? Two of us hold that recovery is not possible after the hemoglobin falls to 10 per cent. or below and that, in fact, 10 per cent. hemoglobin is practically a myth. Two of us hold the opposite. We are also divided regarding the scale, two holding it to be only a toy and two that it is of great benefit in diagnosis and to all practical purposes correct enough.

3. We cannot find anything in the literature we have at hand as to these matters and will greatly appreciate your assistance. Please also refer me to the literature on the subject.

W. P. BARRON, Carmona, Tex.

ANSWER.—1. There are a number of reports on hemoglobin estimations in which the hemoglobin is recorded as being as low as 10 per cent. As these cases are not spoken of as being fatal, it seems quite possible that recovery may ensue in simple anemia (chlorosis) after a reduction of the hemoglobin to that percentage. A percentage of 16 appears to be not unusual. In pernicious anemia even, a remission with a return of the blood-picture to a practically normal condition may occur after the hemoglobin has reached a point as low as 25 per cent.

2. Tallqvist's hemoglobin scale-book is regarded as sufficiently accurate for ordinary clinical purposes.

3. We find no literature especially devoted to the subject but reference may be made to Hare's "Practice of Medicine," second edition, p. 775; also to Cabot's "Clinical Examination of the Blood," fifth edition, p. 150.

LITERATURE ON TYPHOID SERUM

To the Editor:—Oct. 21, 1911, you gave a list of references to the serum treatment of typhoid. Please favor me with a list of literature dealing with this subject from a strictly experimental and bacteriologic standpoint. A. J., Philadelphia.

ANSWER.—By reference to the issue of Oct. 21, 1911, p. 1387, it will be seen that twenty-five articles on this subject were published in 1910 and 1911. The experimental work on which this method of treatment is based was begun more than fifteen years ago, the first preventive inoculations having been made in 1896 and 1897, and it is evident that to give a full bibliography of this subject would require more space than THE JOURNAL can afford. We must ask our correspondent, therefore, to look up the matter in the *Guide to Current Medical Literature* or in the *Index Medicus*.

THE VACUUM BOTTLE AS AN INCUBATOR

To the Editor:—I read with pleasure the articles in THE JOURNAL of Dr. J. H. Schrup (Jan. 27, 1912, p. 273) and of Dr. H. S. Satterlee (March 2, 1912, p. 632), for their work merely corroborated some views that I had already published.

In *Ophthalmology*, July, 1911, I published an article entitled "Simple Bacteriologic Examination of the Conjunctival Sac," in which I said:

"For physicians who have no laboratory at their disposal, I can recommend the following as a substitute for the bacteriologic incubator: Fill a quart vacuum bottle with water at 40° C. and allow it to stand for several minutes. Then pour out half of the water and suspend the culture tube in the bottle with a wire attached to the under side of the cork. In twenty-four hours the temperature will not have fallen more than 4° C., and there is enough air above the water to supply the needs of the organism."

HARRY S. GRADLE, Chicago.

To the Editor:—In the January 27 and March 2 issues of THE JOURNAL, I read the articles, "A Practical, Easy and Cheap Method of Incubation," by J. H. Schrup, and "The Vacuum Bottle as an Incubator," by Henry S. Satterlee. I beg to state that the idea of using the vacuum principle in incubating cultures was not new to me. In fact, I have been experimenting with it for about two years and have succeeded in making a much more perfect apparatus than those described. I use an air-chamber for the culture tubes surrounded by a water-jacket, and this in turn inclosed within the vacuum container, thus doing away with immersion of the culture tubes in water; also preventing accidents to the cultures and eliminating excessive moisture.

JOHN B. DONALDSON, Lorain, Ohio.

[COMMENT: This use of the vacuum bottle seems so natural that it is not surprising that many have thought of it independently.—ED.]

PERICOLITIS

To the Editor:—Please publish in your query column the literature bearing on pericolitis, more especially those authors who first pointed out this pathologic condition. J. E. K.

ANSWER.—The term "pericolitis" is applied to two conditions, one affecting the ascending colon and connected with perityphlitis and the other affecting the descending colon and the sigmoid. The latter was first discussed under the name of "sigmoiditis" but the term "pericolitis" appears as applied to it in the year 1905. There is a reference to an article on pericolitis in 1889. The following articles on this subject may be referred to:

Windscheid, F.: Drei Fälle von Pericolitis, *Deutsch. Arch. f. klin. Med.*, 1889, xlv, 233.
Tavel, E.: Péricolite cicatricielle postappendiculaire, *Rev. méd. de la Suisse Rom.*, 1904, xxiv, 3.
Rolleston, H. D.: Pericolitis Sinistra, Tr. Med. Soc., 1905, xxviii, 230; Pericolitis Sinistra, THE JOURNAL, May 27, 1905, p. 1689.
Buettner, O.: Un cas de péricolite; laparotomie; guérison, *Rev. méd. de la Suisse Rom.*, 1905, xxv, 152.
Potherat, E.: De la péricolite adhésive, sténosante, *Bull. et mém. Soc. de chir. de Paris*, 1906, New Series, xxxii, 609.
Sieur: Péricolite adhésive chronique; étranglement aigu de l'angle duodéno-jéjunal, *Bull. et mém. Soc. de chir. de Paris*, 1906, New Series, xxxii, 625.
Power, D'A.: The Causes, Sequelæ and Treatment of Pericolic Inflammation, *Brit. Med. Jour.*, 1906, ii, 1171.
Walker, H.: Neglected Constipation and Pericolic Inflammation, *Brit. Med. Jour.*, 1907, i, 198.
Kidd, F. S.: Hyperplastic Tuberculous Pericolitis, *Lancet*, Lond., Jan. 5, 1907; abstr. in THE JOURNAL, Feb. 2, 1907, p. 457.
Donaldson, R.: Pericolitis Sinistra with Abscess Formation; Recovery, *Brit. Med. Jour.*, Dec. 14, 1908; abstr. in THE JOURNAL, Jan. 11, 1908, p. 158.
Mantle, A.: Mucous Colitis and Its Relationship to Appendicitis and Pericolitis, *Brit. Med. Jour.*, July 11, 1908; abstr. in THE JOURNAL, Aug. 8, 1908, p. 535.
Jackson, J. N.: Pericolitis, THE JOURNAL, Jan. 30, 1909, p. 414.
Bittorf, A.: Pericolitis, *Mitt. a. d. Grenzgeb. d. Med. u. Chir.*, xx, No. 1, 1909; abstr. in THE JOURNAL, May 15, 1909, p. 1631.
Jackson, J. N.: Membranous Pericolitis, *Surg., Gynec. and Obst.*, September, 1909.
Duval, P.: Membranous Pericolitis, *Arch. d. mal. de l'App. Digestif*, May, 1910; abstr. in THE JOURNAL, July 23, 1910, p. 355.
Robitshek, E. C.: Membranous Pericolitis, *Jour. Minn. State Med. Assn. and Northwest. Lancet*, September, 1910.
Kennedy, J. P.: Membranous Pericolitis, *Dominion Med. Month.*, May, 1911.
Connell, G. F.: Ileocecal Adhesions, THE JOURNAL, July 22, 1911, p. 314.
Crossen, H. S.: Membranous Pericolitis, *Surg., Gynec. and Obst.*, July, 1911; abstr. in THE JOURNAL, Aug. 5, 1911, p. 512.
Gerster, A. G.: Chronic Colitis and Pericolitis, *Ann. Surg.*, September, 1911.
Andersen, K.: Pericolitis, *Norsk. Mag. f. Lægevidensk.*, December, 1911; abstr. in THE JOURNAL, Jan. 6, 1912, p. 74.
Pilcher, L. S.: Surgical Aspects of Membranous Pericolitis, *Ann. Surg.*, January, 1912; abstr in THE JOURNAL, Feb. 17, 1912, p. 513.
Cotte, G.: Membranous Pericolitis, *Lyon Chir.*, January, 1912.

VALUE OF THE COMPLEMENT-FIXATION TEST IN GONORRHEA

To the Editor:—Of what value, in general, is the complement-fixation test of the blood in gonorrhea? What is its value in a patient infected four years ago and at present supposedly cured? Is one justified in excluding gonorrhea if this test be negative?

J. H. B.

ANSWER.—The complement-fixation test is, theoretically, applicable to any infectious disease. Practically, however, the results are not equally satisfactory in all infections, owing, probably, to variations in the different strains of antigen employed in any given test. The value of this test, as applied to gonorrheal infections, is almost the same as in syphilitic invasions. In other words, if every technical precaution is observed, a positive reaction indicates a focus of active gonorrheal infection somewhere in the system, while a negative result does not exclude this condition. The possibilities of variations in the strains of gonococci from which the antigens are prepared are so great that any given case, even though clinically gonorrheal, may not react positively to this test. It is, therefore, customary to employ polyvalent antigens. It is self-evident that cases of acute gonorrhea will not show a positive result until sufficient time has elapsed to permit of absorption of enough toxin to cause a systemic response to invasion, as shown by the presence of antibodies of various types in the serum. In the subacute or chronic cases the chances of positive results are greatly increased, the percentage of positive results being about as high as in syphilitic infections.

"In a patient infected four years ago and at present supposedly cured," a positive result would indicate the presence of a focus somewhere in the system of such active infection that transmission of specific infection would be more than probable, although it must be granted that the gonorrheal antibodies might persist for some time after the invading gonococci were dead.

With our present technic and knowledge, a negative complement-fixation test cannot justify, in any way, the exclusion of gonorrhea, as in many of our typical known gonorrheal cases the reaction is negative to this test. Further researches must be relied on to show why this is so and to formulate methods on which may be based more definite statements as to the presence or absence of gonorrheal infection in any given case.

MERCURIC CHLORID POISONING

To the Editor:—I am in attendance on a case in which a woman inserted a 7½ gr. bichlorid tablet in the vagina, causing mercurial poisoning. I reached the patient about ten hours after the accident and am of the opinion that most of the tablet was absorbed. This happened in June, 1911. I am anxious to learn what prognosis to make in this case for a complete recovery.

ADOLPH O. AAKER, Velva, N. D.

ANSWER.—It is impossible to advise as to what prognosis might be made in this case, for the reason that our correspondent has not even hinted at the present condition of the patient. The following articles on mercurial poisoning might be helpful:

Herzstein, M., and Baer, S.: Case of Acute Mercurial Poisoning Followed by General Necrosis of Maxillary Bones and Purulent Otitis Media, THE JOURNAL, this issue, p. 854.
Mabbott, J. M.: Mercuric Chlorid Poisoning Associated with Secondary Hemorrhage from Vaginal Douche Given Seven Days After Delivery, THE JOURNAL, Aug. 5, 1911, p. 448.
Lankford, Burnley: A Peculiar Case of Mercurial Poisoning, THE JOURNAL, April 9, 1910, p. 1203.
Sharp, W. H.: The Careless and Criminal Use of the Mercuric Chlorid Tablet, THE JOURNAL, April 30, 1910, p. 1459.
Patek, Arthur J.: Poisoning by Mercuric Chlorid Through Vaginal Douches, THE JOURNAL, June 4, 1910, p. 1867.
Poisoning by Sublimate Tablets (Editorial), THE JOURNAL, June 4, 1910, p. 1877.
Kurtz, A. D.: Another Case of Poisoning with Mercuric Bichlorid, THE JOURNAL, June 18, 1910, p. 2056.

The Public Service

Medical Department, U. S. Army

Changes during the week ended March 16, 1912.

Harmon, Daniel W., lieut., March 2, granted thirty days' leave.

Humphreys, Harry G., captain, March 9, relieved from treatment, Army and Navy General Hospital, Hot Springs, Ark., and will return to station.

Phalen, James M., captain, March 12, is detailed to attend the annual meeting, Medical Society of New York, to be held at Albany, April 16 to 18, 1912, and to present a paper on "Tropical Medicine."

Waring, John B. H., lieut., March 13, ordered to report to Lieut. Col. James D. Glennan, Medical Corps, president examining board, Lettermann General Hospital, San Francisco, for examination to determine his fitness for promotion.

Bailey, Howard H., captain, March 9, granted thirty days' leave.

Jackson, Thomas W., M.R.C., March 13, ordered to Walter Reed General Hospital, Takoma Park, D. C., for observation and treatment.

Stallman, George E., dental surgeon, March 10, returned to Fort Sam Houston, Tex., from duty at Fort Logan H. Roots, Ark.

Leary, Thomas J., lieut., March 11, resignation accepted, to take effect March 15, 1912.

Wright, Frederick S., lieut., March 11, on arrival at San Francisco will proceed to Fort Sam Houston, Tex., instead of Fort Adams, R. I., as heretofore ordered.

Wheate, J. Marchal, M.R.C., March 1, granted thirty days' leave.

Medical Corps, U. S. Navy

Changes for the week ended March 16, 1912.

Cuthbertson, Roy, asst. surgeon, detached from the *West Virginia* and ordered to the *St. Louis*.

Bogert, E. S., surgeon, detached from command of the naval hospital, Yokohama, Japan, and ordered home to await orders.

Shipp, E. M., surgeon, detached from the naval hospital, Washington, D. C., and ordered to command the naval hospital, Yokohama, Japan.

Dodge, A. H., P. A. surgeon, commissioned passed assistant surgeon from Oct. 3, 1911.

Hoen, W. S., P. A. surgeon, detached from the *Idaho* and ordered home to await orders.

Murphy, J. F., P. A. surgeon, ordered to the *Idaho*.

U. S. Public Health and Marine-Hospital Service

Changes for the two weeks ended March 13, 1912.

Cofer, L. E., asst. surgeon general, directed to proceed to Cape Charles quarantine to make an inspection of the service and for conference relative to disposition of the hulk *Jamestown*.

White, J. H., surgeon, directed to proceed to Salina Cruz and Manzanillo, Mexico, and other ports on the Mexican and Central American coasts to make inspection of sanitary conditions, with reference to special precautions to prevent the introduction of yellow fever into the United States.

Eager, J. M., surgeon, granted one month's leave of absence from March 23, 1912.

Goldberger, Joseph, P. A. surgeon, detailed to address the New York Academy of Medicine, in New York, on typhus.

Bahrenburg, L. P. H., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Galveston, Tex., for duty in connection with the examination of arriving aliens.

Warren, B. S., P. A. surgeon, relieved from duty at the Marine Hospital, St. Louis.

Eberwein, R. E., P. A. surgeon, relieved from temporary duty at Pensacola quarantine station and directed to proceed to Ellis Island, N. Y., and report to the chief medical officer for duty.

Salmon, Thomas W., P. A. surgeon, granted leave of absence, without pay, for the period April 18, 1912, to Dec. 31, 1913.

Krulish, E., P. A. surgeon, relieved from duty at Galveston, Tex., and directed to proceed to Washington, D. C., and report at bureau for conference with reference to duty in Alaska.

Warner, Harry J., asst. surgeon, directed to report at the bureau on Tuesday, March 26, 1912, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Fauntleroy, C. M., asst. surgeon, directed to report to the bureau on Tuesday, March 26, 1912, for examination to determine his fitness for promotion to the grade of passed assistant surgeon.

Hough, J. S., A. A. surgeon, granted thirty days' leave of absence during the calendar year at times to be approved by Surgeon Brown.

Moncure, J. A., A. A. surgeon, granted thirty days' leave of absence from March 2, 1912.

Walker, T. D., A. A. surgeon, granted thirty days' leave of absence from Feb. 21, 1912, and seven days' leave of absence, without pay, from March 22, 1912.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

RECENT EDITORIAL VIEWS ON PUBLIC HEALTH QUESTIONS

The discussion of public health questions in the daily press goes merrily on, thanks in part to the opposition, but largely owing to a real interest on public health matters. Probably never before have such questions occupied so large a place in the public interest as to-day. The editorial comments are especially interesting as reflecting public opinion and showing the point of view of the layman. The Kansas City (Mo.) *Star* introduces an editorial discussion of hospitals with these general observations on physicians:

"Doctors are constantly working to deprive themselves of jobs. Medical investigators in Cuba risked their lives to learn how to prevent yellow fever from developing. It is due to the researches of doctors that small-pox has been nearly stamped out in enlightened communities, that typhoid fever can now be prevented and that a successful war is being waged against tuberculosis.

"The public spirit of the profession is illustrated strikingly in another way. The discovery of every doctor or medical investigator is given to the world. A man who invents a patent hairpin may get rich out of his invention. But if a doctor, after a lifetime of work, should devise a cure for tuberculosis he would not receive a penny for his discovery.

"The high standard set by the medical profession suggests the possibility for progress in other lines of human endeavor. Suppose, for instance, that the legal profession should devote itself as single mindedly and earnestly to getting rid of litigation as the doctors have to banishing disease!"

The New York *World*, discussing the often-used reason for federal legislation, is not convinced thereby. It says:

"It is an argument that never fails to startle when first heard. 'Why,' gasps the astonished listener, 'should a paternal government be more careful of pigs than of people'?

"To those, indeed, that believe in governmental regulation of every movement of man from the cradle to the grave, the argument is a good one, for under such ceaseless supervision and domination there would soon be little difference between the brute and the human. Most men, however, prefer that there should be a difference. It is beneficial to mankind that each should have a large degree of liberty in looking after his own welfare."

Just how preventing the use of impure water, adulterated milk and poisonous food articles involves placing children on the level of the brute creation, the *World* does not explain. It continues:

"Moreover, it should not be overlooked in the controversy that while administration experts are needed to guard the health of hogs that are being fed and fatted for slaughter, none is needed to look after a hog in the woods that is not to be slaughtered. While, therefore, supervision makes the most pork, freedom makes the healthier hog. In that one respect pigs and people are alike."

We are not informed where the *World* secured its figures on the morbidity and mortality rates among wild hogs or on what authority it assumes that the wild hog is healthier than the domestic animal. Apparently, it concludes that good health would in some way involve limited freedom, yet generally it is the sick and the crippled whose freedom is impaired, and the well who are free.

A cheerfully optimistic paper is the Atchison (Kan.) *Globe*. Its editor positively refuses to become panic stricken over the awful dangers of "a doctor's trust." He says:

"Someone somewhere is worrying about a measure before Congress which is pointed out as an effort to create a doctors' trust. Come from time to time pamphlets and periodicals setting forth the danger therein to our bulwarks and palladiums, and urging that the editorial shirt be torn in the interests of a free nation and independent colic cures and other helpful dope. . . .

"Still, we belong to the Don't Worry Club, even unto the thirty-third degree, and this mighty menace of medical men excites us not at all . . . after reading the measure perfunctorily, we fail to see it that way. Also, another cause for complacency is the fact that this alleged trust is said to be forming by government assistance. . . . Since the government frowns on trusts, except those of its own, such as the postage stamp industry, that is another occasion for relief.

"Also, this matter of drug regulation may need to be a bit more stringent. Most of the doctors we know are honorable men, even if their pills and powders fail to give the desired results occasionally or oftener. And they are pretty apt to know more of their business than the rank outsider; they might even be more reliable in regulating the manufacture and sale of dope of one kind and another than one whose favorite remedies are bag-punching, back rubbing or holding the thought. And there isn't going to be any law that we can see from this distance which will prevent people going after health in the manner which seems to them most desirable and likely to get results. If there is any such intention in the amendment aforementioned, it should get both barrels from Congress, and probably will; even if passed it would be repealed, for there are plenty of people who fail to agree with the doctors, who don't even agree very well among themselves.

"About all we are sure of is that the pamphleteers engaged by the opposition haven't made their case clear, and that their articles are too long and uninteresting, and that the place to bust the trusts, if trusts there be, is in the realm of reason known as the supreme court."

This line of argument is commended to our excited sectarian friends. If there is a doctor's trust, why not hale it into court and "bust it"? If the Owen bill interferes with personal liberty, isn't the United States supreme court a pretty good place to prove this? Certainly it won't last long if it is everything it is charged with being.

In the New York *Sun* for February 8 appeared an excellent editorial on a federal department of health. To this a reader took exception, asserting that the proposition for such a department was inspired by "political doctors." To which the *Sun* replies:

"To the boards of health that are 'political' appointees the people owe their education; these men issue bulletins to teach the people how to maintain their health, and they do it with the connivance of the honorable doctors whom they seem to dupe into acquiescence in measures which actually 'take the bread out of their own mouths,' that people like our correspondent may keep out of their clutches. Witness the edifying spectacle now before the public of the New York Board of Health begging the Tammany representatives of the educated people three times for a paltry appropriation to prevent the spread of small-pox, which if unrestrained would bring to the doctors, honorable and dishonorable, more fees than would all the splitting of fees for a century. No wonder this cor-

respondent characterizes the honorable doctors as innocent and confiding (synonym: simple, idiotic), for such examples of altruism do not exist among any other class of citizens."

Just one more quotation, this time from the Cynthiana (Ky.) *Log Cabin*. After discussing the recent attack in the state legislature on the Kentucky State Board of Health, the editor proceeds to formulate his creed in no uncertain terms:

"In our opinion, any physician opposed to vaccination is fifty years behind the times. In our opinion every physician who presumes to treat diseases should be able to meet the requirements of the State Board of Health. There are so many medical colleges in the country that a diploma has a very indefinite meaning. Even lawyers and school teachers, no matter what diplomas they hold, must undergo an examination to determine their qualifications before they can practice or teach. And it is very much more important that the people have some slight protection against the medical incompetents and the fakers. The physician who is qualified will not object to the reasonable requirements of the State Board of Health, and those who cannot meet those requirements are a menace and ought not to be allowed to attempt to practice medicine. In our opinion there is no class of men who do more unselfish labor, without reward, than the medical profession. . . . Many people will doubtless be misled by the insinuating and indefinite harangues of the 'League for Medical Freedom,' but we are very sure that every legislator and every citizen is doing his state a splendid service when he upholds the state board in every effort to secure pure foods, pure milk, healthy cattle, and to keep the quacks and the incompetents out of the medical profession."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

General Subject for the Month: Gastro-Enteric Diseases of Infancy and Childhood

Eighth Month—First Weekly Meeting

DIGESTION IN INFANCY AND CHILDHOOD

STOMACH, ANATOMY AND PHYSIOLOGY[1]

Shape, size position, musculature, at birth, at one year. Capacity, by months, up to one year. Gastric juice; constituents, reaction. Changes occurring in human milk, in cow's milk, duration of gastric digestion. Bactericidal action of gastric juice. Elements absorbed from stomach.

INTESTINE, ANATOMY AND PHYSIOLOGY

Size, length, position (a) of small intestine, (b) of large intestine.

INTESTINAL DIGESTION: Changes in proteids,[2] active agent. Carbohydrates at birth, six and twelve months. Changes in fats. Action of bile, of succus entericus. Elements, proportion of each, absorbed from small intestine. Absorption from large intestine.

INTESTINAL BACTERIA: *Bacterium lactis aerogenes, Bacillus coli communis:* effect of each.

FECES:[3] Color, consistency, odor, reaction, composition (a) of meconium, (b) milk feces.

ACUTE GASTRIC INDIGESTION

CAUSES: Improper diet in quality and quantity, changes in diet, weaning. Depressing conditions, heat, cold, dentition, onset of acute infections.

SYMPTOMS: Food stagnation, vomiting, pain, depression, stupor, temperature, weak, rapid pulse, diarrhea. Usual course. Prognosis.

TREATMENT: (a) Empty stomach, (b) secure rest to it. Stomach washing. Dietetics. Medicinal treatment.

REFERENCE BOOKS FOR THE EIGHTH MONTH

Holt: Diseases of Infancy and Childhood.
Rotch: Pediatrics.
Koplik: Diseases of Infancy and Childhood.
Starr: American Text-book of Diseases of Children.
Chapin and Pisek: Diseases of Children.
Taylor and Wells: Diseases of Children.
Pfaundler and Schlossman: Diseases of Children.

1. Progressive Medicine, March, 1907.
2. Alexander and Bullowa: Archives of Pediatrics, January, 1910. Alexander and Bullowa: THE JOURNAL A. M. A., Oct. 1, 1910.
3. Morse: New Orleans Med. and Surgical Jour., August, 1910. Talbot: Boston Medical and Surgical Journal, Feb. 3, 1910.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ARIZONA: Phoenix, April 1-2. Sec., Dr. Ancil Martin.
CALIFORNIA: San Francisco, April 2. Sec., Dr. Charles L. Tisdale, 929 Butler Building.
COLORADO: State Capitol, Denver, April 2. Sec., Dr. David A. Strickler, 612 Empire Building.
IDAHO: Boise, April 2-3. Sec., Dr. O. J. Allen, Bellevue.
ILLINOIS: Coliseum Annex, Chicago, April 30. Sec., Dr. James A. Egan, Springfield.
MINNESOTA: State University, Minneapolis, April 2. Sec., Dr. W. S. Fullerton, 248 Lowry Building, St. Paul.
MONTANA: The Capitol, Helena, April 3. Sec., Dr. W. C. Riddell.
NEW MEXICO: Santa Fé, April 8-9. Sec., Dr. J. A. Massie.
OKLAHOMA: Oklahoma City, April 9-11. Sec., Dr. John W. Duke, Guthrie.
RHODE ISLAND: Room 315, State House, Providence, April 4-5. Sec., Dr. Gardner T. Swarts, State House.
UTAH: County Building, Salt Lake City, April 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.
WEST VIRGINIA: Parkersburg, W. Va., April 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

Nebraska and South Dakota Reciprocate

Dr. C. P. Fall, secretary of the Nebraska State Board of Health, states that reciprocal relations have been established between Nebraska and South Dakota on the basis of an examination only.

Missouri September Report

Dr. Frank B. Hiller, secretary of the Missouri State Board of Health, reports the written examination held at Kansas City, September 25-27, 1911. The number of subjects examined in was 14; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 53, of whom 36 passed and 17 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Northwestern University Medical School	(1911)	89.7
Rush Medical College	(1911)	83.3, 86.4
Illinois Medical College	(1910)	80
University of Kansas	(1911)	89.3
Kansas Medical College	(1911)	82.9
University of Louisville (1910) 75.4;	(1911)	75.7
Johns Hopkins University (1904) 89.4;	(1910)	87.8
Barnes Medical College (1898) 77.2; (1909) 75.6;	(1911)	75.6, 79.8, 82.5.
St. Louis University	(1907)	75.6
St. Louis Coll. of P. and S. (1910) 76.1,	(1911)	75
Kansas City Hahnemann Medical College (1910) 80.8;	(1911)	75.8, 75.8, 76.1.
Ensworth Medical College (1903) 81;	(1910)	75.3
University Medical College, Kansas City ((1908) 76.1; (1910) 75.9; (1911) 75.5, 76.1, 78.5, 81.8, 82.5.		
Washington University, St. Louis	(1911)	80.4
American Medical College (1910) 76.8;	(1911)	82.2
University of Pennsylvania	(1911)	88.1
Meharry Medical College	(1911)	76.1
FAILED		
University of Louisville (1909) 67.4;	(1910)	66.8
Kentucky School of Medicine	(1907)	46.3
Barnes Medical College (1908) 53.3; (1910) 67.4;	(1911)	67.6, 68.4, 70.1.
St. Louis College of Physicians and Surgeons (1911) 50.3, 63.7, 65.3, 66.3, 67.3.		
Ensworth Medical College (1909) 45.3;	(1911)	67.6
University Medical College, Kansas City	(1911)	54.4
Creighton Medical College	(1911)	67.3

Texas November Report

Dr. J. D. Mitchell, secretary of the Texas State Board of Medical Examiners, reports the written examination held at Fort Worth, Nov. 14-16, 1911. The number of subjects examined in was 12; total number of questions asked, 120; percentage required to pass, 75. The total number of candidates examined was 27, of whom 23 passed, including one osteopath, and 4 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
Atlanta College of Physicians and Surgeons	(1905)	84
Chicago College of Medicine and Surgery	(1911)	84, 85
Hospital College of Medicine, Louisville (1904) 79;	(1905)	75
University of Louisville	(1911)	75, 76
Tulane University of Louisiana	(1910)	82
Tufts College Medical School	(1910)	87
St. Louis Medical College	(1875)	75
Columbia University, College of Phys. and Surgs.	(1909)	84

University of Pennsylvania	(1908)	80
University of Nashville	(1911)	75
Vanderbilt University	(1911)	79
Fort Worth University	(1910) 83; (1911)	80
University of Texas	(1910) 86; (1911)	86
Southwestern University Med. College	(1910) 82; (1911)	80
Baylor University	(1911)	78
National Medical School, Mexico City	(1901)	75

FAILED

University of Louisville	(1910)	69
Memphis Hospital Medical College	(1907) 63.2; (1911)	74.7
University of Nashville	(1908)	75.5

Colorado January Report

Dr. David A. Strickler, secretary of the Colorado State Board of Medical Examiners, reports the written and oral examination held at Denver, Jan. 2, 1912. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. The total number of candidates examined was 8, all of whom passed. Twenty-one candidates were registered on presentation of satisfactory credentials, including state licenses. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
University of Colorado (1911) 79.9, 84, 84.7, 85.9, 89.4		
Chicago College of Medicine and Surgery	(1910)	91.2
Medico-Chirurgical College of Kansas City	(1904)	79
Syrian Protestant College	(1911)	83

LICENSED ON PRESENTATION OF SATISFACTORY CREDENTIALS

College	Year Grad.	State Licenses
University of Colorado	(1909) (1911)	Idaho
Northwestern University Medical School	(1910)	Illinois
Yale University	(1907)	Connecticut
American Medical Missionary College	(1901)	Illinois
Hering Medical College	(1899)	Kansas
Rush Medical College	(1886)	Illinois
Kookuk Medical College, Coll. of Phys. and Surgs.	(1905)	Iowa
Kentucky University	(1900)	Penna.
Hospital College of Medicine, Louisville	(1903)	Indiana
Tulane University of Louisiana	(1908)	Louisiana
Tufts College Medical School	(1897)	New York
University of Michigan, Dept. of Med. and Surg.	(1899)	Illinois
University of Minnesota, College of Medicine	(1902)	Minnesota
University Medical College, Kansas City	(1910)	Missouri
Creighton Medical College	(1909)	Nebraska
Dartmouth Medical School	(1909)	New York
New York Med. College and Hospital for Women	(1899)	New York
Jefferson Medical College	(1906)	Wisconsin
University of Pennsylvania	(1905)	Penna.
University of Tennessee	(1907)	Tennessee

Washington January Report

Dr. F. P. Witter, secretary of the Washington State Board of Medical Examiners, reports the written examination held at Spokane, January 6, 1912. The number of subjects examined in was 11; total number of questions asked 110; percentage required to pass, 75, and not less than 60 in any one subject. The total number of candidates examined was 49, of whom 35 passed, including one osteopath, and 14 failed, including one osteopath. The following colleges were represented:

PASSED

College	Year Grad.	Total No. Examined.
Denver and Gross College of Medicine	(1910)	1
George Washington University	(1909)	1
College of P. and S., Chicago	(1908) (1910)	1
Hering Medical College	(1911)	1
Rush Medical College	(1901)	1
Hahnemann Med. Coll. and Hospital, Chicago	(1905)	1
Northwestern University Medical School	(1910)	1
Kookuk Med. Coll., Coll. of P. and S.	(1904)	1
University of Louisville	(1900) (1910)	2
Johns Hopkins University	(1911)	2
College of P. and S., Baltimore	(1909)	1
University of Michigan, Homeopathic College	(1911)	1
University of Minnesota, College of Medicine and Surgery	(1898) (1899) (1900) (1911)	4
St. Louis University	(1910)	1
Washington University, St. Louis	(1898)	1
Cornell University Medical College	(1908)	1
University of Buffalo	(1897) (1910)	2
Columbia University, Coll. of P. and S.	(1894) (1905)	2
Ohio-Miami Medical College	(1910)	2
Cincinnati College of Medicine and Surgery	(1901)	1
University of Oregon	(1909)	1
Willamette University	(1911)	1
Woman's Medical College of Pennsylvania	(1909)	1
Trinity Medical College, Toronto, Ontario	(1903)	1

FAILED

College of Physicians and Surgeons, Chicago	(1902)	1
Physio-Medical College of Indiana	(1898)	1
University of Louisville	(1911)	2
Kentucky School of Medicine	(1906)	1
Baltimore Medical College	(1910)	1
Univ. of Michigan, Dept. of Med. and Surg.	(1883)	1
Missouri Medical College	(1895)	1
Barnes Medical College	(1907)	1
Washington University	(1911)	1
Eclectic Medical College, Cincinnati	(1911)	1
University of Oregon	(1911)	1
University of Siena, Italy	(1909)	1

The following questions were asked:

ANATOMY

Answer 10: 1. Name the bones of the cranium. Give the anatomy of the inguinal region and the perineum. 2. Give the contents of the nine regions of the abdomen. 3. Give origin, course and distribution of sciatic nerve. 4. Name the branches of the aorta—ascending, arch and descending. Give course and distribution of the carotid. Give and describe the blood supply of the stomach and bowels. Describe the pulmonary artery. 5. Name the muscles of the abdomen and give origin and insertion. 6. Name and give relation of the important organs, vessels, nerves, muscles and structures of the neck. 7. Give origins and insertions of muscles of the shoulder. 8. Give muscular and tendinous attachments of patella. 9. Give the course of the external and internal saphenous veins. 10. Describe the portal circulation. 11. Describe the sympathetic nervous system. 12. Give anatomy of ear and mastoid and their relations.

HISTOLOGY

Answer 10: 1. Name and describe the membranes of the brain. 2. Describe the red blood-corpuscle and tell source of origin. 3. Give structure of human skin. 4. Describe the appearance of healthy adult liver as seen by the microscope. 5. Locate and give structure of Peyer's patches. 6. Name, describe and locate two types of epithelium. 7. Where are the nerve cells found? 8. Locate the thyroid gland and describe its structure. 9. Name the layers of the retina. 10. Name the varieties of muscle and state difference between them. 11. Describe non-medullated fibers and where occur. 12. Give histologic difference between the pyloric and cardiac end of stomach.

PHYSIOLOGY

Answer 10: 1. Name the principal groups of the normal constituents of the body and give illustrations of each. 2. What are carbohydrates, and what part do they take in the general metabolism? 3. What is the distinguishing element of (a) albuminous substances, (b) hydrocarbonaceous substances? 4. Why is an exclusive diet of (a) animal food not suited to man's needs? (b) vegetable substances? 5. Name the fluids secreted by the digestive apparatus. Where secreted, and reactions of each? 6. Describe the gastric juice, its action and the product of gastric digestion. 7. Describe the chyle, and how does it enter the general circulation? 8. Describe briefly the phenomena of the coagulation of the blood. 9. What are the solitary glandules? Where found? Their function? 10. Describe the iris and give its function. 11. Describe the composition of the blood and the functions of its component parts. 12. What is the physiologic significance of diabetes or sugar in the urine?

BACTERIOLOGY

Answer 10: 1. Define bacteria and classify them according to form, habitat and oxygen requirements, describing each classification and giving examples. 2. Discuss microbic association. Give examples. 3. What is the chemical nature or composition of bacteria? What is a pathogenic germ? Toxicogenic? 4. Tell what you can of lactic-acid fermentation—in the mouth, the stomach, in milk. Give its cause and the material acted on. 5. What is necessary to demonstrate the causal relation of a microorganism to a given disease? Give the four rules of Koch. 6. What are the water-borne diseases? How would you determine the presence of pathogenic bacteria in water? Distinguish between typhoid and colon bacilli. 7. A sample of sputum is brought to you. How would you determine the presence or absence of the tubercle bacillus? What is tuberculin? 8. What are toxins? Antitoxins? Distinguish between active and passive immunity. For what diseases are antitoxins known and used? Tell all you can about diphtheria antitoxin. How is it made? How standardized? 10. Tell all you can about bubonic plague. 11. Describe Widal's reaction. 12. Give the principle for the Pasteur treatment for rabies.

CHEMISTRY

Answer 10: 1. What is urea? How would you determine the amount? 2. What degree Fahrenheit is 95 C.? 3. Write the formula of (a) baking soda, (b) lunar caustic, (c) cream of tartar, (d) chlorid of lime, (e) fire damp. 4. Give the chemical difference between calomel and corrosive sublimate. What is (a) water of crystallization, (b) efflorescence, (c) deliquescence? 6. What are proteids? (b) From what are they derived? (c) Name the chief proteids. 7. Describe H_2O: (b) its properties; (c) what is the purest natural H_2O? 8. Name the halogens. Give their symbols and atomic weights. 9. Describe the various allotropic forms of carbon. 10. What is meant by a volatile liquid? Name one and give its formula; (b) same question relative to a fixed liquid. 11. Define (a) calorie, (b) synthesis, (c) molecule, (d) fusing point, (e) osmosis. 12. Complete the following equations and write the name of each resulting compound under its formula:

$$HgSO_4 + Hg + 2\,NaCl.$$

$$NaC_2H_3O_2 + NaOH.$$

$$As_2O_3 + 3\,H_2S.$$

PATHOLOGY

Answer 10: 1. What are the characteristics of a growth which make one pronounce it malignant? What are the principal subdivisions of malignant growths and how do you distinguish them? 2. Give the pathologic appearance (macroscopic and microscopic) of the kidney of chronic interstitial nephritis and give the urinary findings. 3. Describe carefully the condition of the arteries in arteriosclerosis and describe how the heart is affected by it. 4. What is the pathologic condition in diabetes mellitus? 5. Describe carefully the appearance of the lung (macroscopic and microscopic) in acute lobar pneumonia. 6. Describe carefully the various steps in the formation of a tuberculous cavity in the lung. 7. What tissues are affected and in what manner are they affected in diphtheritic paralysis of the legs? 8. Describe the gross and minute appearance of the typical alcoholic liver. 9. Describe the lesions in acute cerebrospinal meningitis (epidemic form). 10.

Describe the pathologic conditions present in exophthalmic goiter. 11. Describe the tissues affected and give the microscopic appearance of the blood in pernicious anemia. 12. What tissues are affected in rheumatoid arthritis? Describe the joint lesion.

OBSTETRICS

Answer 10: 1. Name in order the things to be determined on visiting a patient supposed to be in labor. 2. Define the first, second and third stage of labor, and give the mechanism of breech presentation. 3. Give the definition of pseudocyesis and name other conditions from which it is distinguish it, and give the differential diagnosis 4. What is eclampsia, its frequency, time of occurrence, and effect on mother and child? 5. Define premature labor and abortion, naming the most constant causes of each in order of importance and frequency. 6. Describe fully the obstetric forceps and craniclast and name the indications for their use. 7. What do you understand by accidental concealed hemorrhage? Give the causes, symptoms and prognosis. 8. Define version, name the kinds and teil when indicated. 9. What is puerperal infection? Give a clinical picture of a case, including causes, symptoms and pathology. 10. Define hydatidiform mole and give symptoms, frequency, pathology and prognosis. 11. Name and describe four of the most common abnormalities of the female pelvis. 12. Name conditions occurring during labor which jeopardize the life of the child.

TOXICOLOGY

Answer 10: 1. Define a poison. Give methods in which they may be introduced into the organism. 2. Give classification of poisons. 3. Give effects, local and remote, of poisons in general and indicate the particular poisons that affect particular organs or structures. 4. What are ptomains? 5. Give symptoms of mushroom poisoning. 6. Name the poisonous gases most commonly met with and give their symptoms. 7. Give symptoms of poisoning by arsenic. Give symptoms of poisoning by phosphorus. 8. What diseases may follow from eating pork? Describe them. 9. Describe idiosyncrasy and tolerance and state what effect they may have on poisoning. 10. Does the habitual taking of poisonous drugs diminish the risk of the latent or insidious remote effects? 11. What is wood alcohol? How may it be recognized from grain alcohol? Describe symptoms of poisoning by same. 12. What is denatured alcohol? Is it a poison? In what kind of poisoning may a scarlatina-like rash appear?

GYNECOLOGY

Answer 10: 1. Give differential diagnosis between appendicitis and right-sided adnexal inflammation. 2. Name varieties of fibroids, most frequent location of each and diagnose from an unruptured ectopic gestation. 3. What age does carcinoma of the cervix most frequently develop? Give prognosis, method of dissemination and differential diagnosis from cervical erosion. 4. Name varieties of menstrual abnormalities. Describe and give etiology of each. 5. How is the uterus normally protected from infection by pathogenic bacteria? 6. What is pelvic hematocele? For what is it most likely to be mistaken? Give etiology and symptomatology. 7. What is vaginismus? Bartholinitis? Pyosalpinx? Coccygodynia? Hematometra? 8. Give distinguishing symptoms between a four months' pregnancy an uterine fibroid and an ovarian cyst. 9. Describe normal menstruation and the changes that take place in the endometrium at that time. 10. What is subinvolution? And what are its chief etiologic factors? 11. How would you distinguish between a case of amenorrhea, the menopause or a three months' pregnancy? 12. Give symptoms and diagnosis of gonorrhea in the female. Why is it so serious in the female? And what are its sequelæ?

GENERAL DIAGNOSIS

Answer 10: 1. Differential diagnosis of intracapsular fracture and dorsal dislocation of head of femur. 2. Give in detail tests to determine the cause of coma in a patient whose history is unobtainable. 3. Give the symptoms and physical signs of aortic insufficiency to the stage of failing compensation. 4. Give the association of physical signs—percussion, auscultation of respiration, vocal fremitus—in (a) solidification of pulmonary structure; (b) large cavity with elastic walls; (c) effusion into pleural sac. 5. Give and define four pathognomic symptoms of locomotor ataxia; how distinguish multiple neuritis from locomotor ataxia? 6. Define pemphigus; sycosis vulgaris; herpes zoster. A description of the eruption in each case is especially desired. 7. Causes and symptoms of decubital gangrene; how prevent? 8. Diagnose between tetanus, hysterical tetanus and strychnin poisoning. 9. In what lobe is almost always situated a cerebral abscess due to ear disease? 10. Give symptoms of cerebral abscess following empyema of the mastoid. 11. In abdominal operations it is frequently necessary that the large intestine be recognized with certainty or the small bowel be positively identified. Give differences. 12. How many forms of non-malignant stricture of the rectum? How far above the anus is a simple stricture usually situated?

HYGIENE

Answer 10: 1. Name the food principles and state in what proportion they form a balanced ration. Is there any one food which contains all the principles in the proper proportion? What is the effect of living on a single article of food? 2. What is the chief cause of high infantile mortality? Give directions for the proper care of milk at the time of milking and until it is fed to the child. Are preservatives in milk ever justifiable? Why? 3. Why are "patent medicines" dangerous? What is the effect of alcohol taken in large amounts (a) on the stomach; (b) on the liver; (c) on the susceptibility to disease; (d) on the capacity for work; (e) on the intellectual capacity? 4. What constitutes a safe and suitable drinking-water? What are the best methods of purifying a water-supply? 5. What are the best methods for the disposal of sewage? Garbage? 6. Give fully the hygienic measures for tuberculosis, both for the care of the patient and for the protection of others. 7. What are the best means for the disinfection of rooms? Clothing? Hands? Sputum? Excreta? Dishes? 8. What constitutes air suitable for breathing. What are the chief impurities of bad air and what are their effects? How much air space does the individual need? 9. Of the clothing fibers, which is best protection against sunlight? Against cold? Which is best for underclothing? For foot wear? Give reasons. 10. Discuss ventilation and heating of homes from standpoint of hygiene. 11. What are the requirements of a physician and others to prevent the spread of disease? 12. If you were a meat and food inspector, what requirements would you make of the dealers in these things? Give reasons.

Book Notices

DIE EXPERIMENTELLE BAKTERIOLOGIE UND DIE INFEKTIONSKRANKHEITEN MIT BESONDERER BERÜCKSICHTIGUNG DER IMMUNITÄTSLEHRE Von Dr. W. Kolle, Professor der Hygiene und Bakteriologie an der Universität und Dr. Hetsch, Medizinalabteilung des Kriegsministeriums in Berlin. Third Edition. Volumes I and II. Paper. Price, $8.50. Pp. 968, with 180 illustrations. New York: Rebman Co., 1911.

This book has reached its third edition since 1906, showing a substantial and merited popularity. Its scope is somewhat different from that of an ordinary text-book of the type familiar in this country, in that it is written in the form of lectures, of which there are fifty-nine, and the relation of bacteria to disease receives far more consideration than the properties, characteristics and biology of the bacteria themselves. It is eminently the sort of book which should be in the library of the progressive physician who reads German, and who wishes to have at hand an authoritative, reasonably extensive, yet readable account of the infectious diseases and the organisms which cause them. For the American physician, however, this publication is extremely defective because of its almost absolute neglect of all the work done in this country on the infectious diseases, which is neither inconsiderable nor unimportant. We had thought at first to list the serious omissions in this respect, until we found that it would be practically equivalent to a list of the entire American work on bacteriology, infectious diseases, and allied subjects. To be sure, there are a few casual references to Americans, Englishmen, and other non-Teutonic investigators, but for all practical purposes this book is a series of interesting, well-written lectures on German bacteriology. To mention glaring omissions: The discussion of the relation of bovine to human tuberculosis contains no mention of the extensive and fundamental observations of Theobald Smith; the leprosy bacillus is not known (by Kolle) to have been isolated in pure culture; blastomycetic infections are practically limited to the few comparatively insignificant reports by European observers; Flexner's masterly studies of meningococcus infections and anterior poliomyelitis are dismissed with a word; the plague studies in California are unknown—and so on to the end of the chapter. It is doubly unfortunate that this condition exists; on the German side, the advance of medical science is seriously delayed by chauvinistic ignorance, and for our part we must suffer because we have to rely for the best scientific literature on the superior enterprise of German publishing houses. We should like to have that literature include the good work of all nations and not merely that of German-speaking countries, however much this may surpass in amount the product of other lands.

MOVABLE KIDNEY, ITS ETIOLOGY, PATHOLOGY, DIAGNOSIS, SYMPTOMS AND TREATMENT. By William Billington, M.S. (Lond.), F.R.C.S., Senior Surgeon to Out-Patients, Queen's Hospital, Birmingham. Cloth. Price, 7 shillings 6 pence net. Pp. 167, with illustrations. New York: Cassel & Co., 1910.

The rôle played by the ordinary movable kidney in symptomatology has been variously regarded during the past few years, some writers attributing to it great importance, others asserting that it usually has little to do with the symptoms in the ordinary cases. The author of this little monograph has certainly "gone the limit" in assigning to movable kidney a causative influence in the production of all kinds of conditions. In fact, if there are any which escaped being included among the results of movable kidney, it would be hard to find them. The author says: "The symptoms of movable kidney are so diverse that their mere enumeration is of little practical value. So far as possible they will be grouped in such a way that those referable to a particular organ or system are considered together. Arranged in this way they can be described under six headings, according as they relate to: (1) the kidney and urine; (2) the sexual organs; (3) the digestive system; (4) the circulatory system; (5) the cerebrospinal nervous system; (6) the mind." Under these six headings are described almost every conceivable symptom, including pain of all kinds and varieties. Eight distinct points on the anterior surface of the body and nine on the posterior surface are mapped out as characteristic

locations of kidney pain. Albumin and casts, it is said, are frequently found in the urine and may lead to an erroneous diagnosis of Bright's disease. Blood in the urine and pyuria may occur, the author believes, as a result of movable kidney and be cured by fixation of the kidney. Under female sexual disorders are found mentioned dysmenorrhea, profuse leukorrhea, endometritis, ovaritis, menorrhagia and metrorrhagia and even prolapse of the uterus. Under male sexual disorders are found the following: "aching pains in the testicles, frequent nocturnal emissions and delusions relating to the sexual organs may be caused by movable kidney." Under disorders of the digestive system are mentioned capricious appetive, flatulency, nausea and vomiting, constipation and diarrhea, dilatation of the stomach, gastric ulcer, mucous colitis, and affections of the appendix. Under disorders of the nervous system are found neurasthenia, headache, epilepsy, tachycardia and Raynaud's disease. Of disorders of the mind we find the following: loss of memory, mental confusion, mental depression, melancholia, suicidal tendencies, homicidal impulses, morbid fears and emotional disturbances.

It will thus be seen that almost any condition may be the result of movable kidneys (for the author believes that both kidneys are movable very commonly) and may be cured by fixing the kidneys. The author seems to have almost unlimited faith in the value of nephropexy in pelvic disorders. In this connection we find the following: "The writer has known of a case where at one sitting ventrofixation of the uterus, excision of the right ovary, appendectomy and right-sided nephropexy were performed! Such procedures savor of gross empiricism and are out of place in scientific surgery." But suppose a patient has a badly displaced uterus with adhesions of the appendix to the right ovary or tube; is it to be expected that fixing the kidney is going to cure all of these conditions? Or should these various operations be done one at a time, thus subjecting the patient to several operations instead of only one? It is a great deal more unscientific to think that fixing a movable kidney is going to cure all of these conditions than it is to do all that is necessary at one operation provided the patient is in condition to permit the work being done.

The author assigns to trauma the first place among the causes of movable kidney, yet he does not cite a single case in which movable kidney was proved to be the result of trauma. The author's method of fixing the kidney is not new, as he states. It is a combination of the ideas of Edebohls, Fullerton, Goelet and Brödel.

Those who believe that movable kidneys are harmless and give rise to no symptoms may read the book with benefit, for there is no doubt that movable kidneys may cause considerable disturbance in some patients, but one should not take too seriously all that is said concerning symptomatology, for some of it is certainly overdrawn.

HANDBOOK TO MEDICAL EUROPE. A Ready Reference Book to the Universities, Hospitals, Clinics, Laboratories and General Medical Work of the Principal Cities of Europe. By James Henry Honan, M.D. Cloth. Price, $1.50. Pp. 261, with Maps of Berlin, Edinburgh, London and Paris. Philadelphia: P. Blakiston's Son & Co., 1912.

The object of this handbook is, in the author's words, "to give a concise, comprehensive outline of the medical work of Europe, as a guide to English-speaking physicians who go abroad for post-graduate work and as a book of reference for all who are interested in medical work in other lands." Since the author regards Germany as "the most attractive country in the world for medical men," he has devoted over a third of the book (ninety pages) to the various medical centers of Germany. His sixteen years' residence in that country has enabled him to give a full and interesting account, for Berlin especially, not only of university courses, but also of various institutions of medical interest, such as the state institute for the examination of foodstuffs, the open-air schools, the convalescent camps and works of public sanitation. To the prospective visitor to Germany at least, the book would seem to offer much assistance. About eighty pages are devoted to Great Britain, twenty-eight to Austria-Hungary, twelve to France, and twenty-five to the rest of Europe. A somewhat perfunctory treatment of Europe outside of Germany might seem to be indicated by the fact that the address given for the American Medical Association of Vienna is one which has been superseded for nearly a year and a half. Apparently neither the author nor any other competent person has read the proof of the book, for it abounds in typographic errors, such as "praktesch" for "praktisch," "Verien" for "Ferien," "Piti" for "Pitié," "Brabont" for "Brabant" and "Uttrecht" for "Utrecht." With the improvements that a second edition will probably include, this handbook will be of much service.

ARBEITEN AUS DEM PHARMAZEUTISCHEN INSTITUT DER UNIVERSITÄT BERLIN. Herausgegeben von Dr. H. Thoms, Professor und Direktor des Pharmazeutischen Institutes der Universität Berlin. Eighth Volume. Cloth. Pp. 280. Berlin: Urban & Schwarzenberg, 1911.

The eighth volume of these "Arbeiten" reports the work for 1910 on the same plan as the previous volumes. The department is still under the able direction of Professor Thoms, whose name is now well known to those interested in the campaign for integrity in the exploitation of proprietary remedies. The reports of work on secret remedies, etc. is perhaps of less interest to American physicians because none of the remedies investigated is exploited in the United States—at least to any considerable extent. Such investigations are valuable, however, because there is no knowing when a nostrum which has exhausted the soil in Europe may be transplanted to America in the hope of securing a more profitable crop. Some of the analyses illustrate the identity in the action of the nostrum-maker's mind in all countries and climes. A substitute for alcohol, in spite of the affirmation of the makers that it contains no methyl, ethyl or amyl alcohol, turns out to consist chiefly of the first-named. A "bladder-nerve bonbon" is found to consist of milk sugar, starch and iron-containing bolus alba.

Most of the work is of a scientific character including investigation of methods of extracting drugs, adulteration of African sandalwood, and similar topics. An interesting article by Professor Thoms deals with attempts to cultivate Japanese peppermint in Germany, by which it is hoped that Germany will become independent of Japan in the supply of oil of peppermint and menthol.

Another important article deals with the structure and chemical properties of epinephrin. A large section of the book is devoted to the investigation of foodstuffs and technical products from the colonies. Like previous volumes the reports in this work contain much of interest to physicians as well as to pharmacists.

THE BRITISH PHARMACEUTICAL CODEX, 1911. An Imperial Dispensatory for the Use of Medical Practitioners and Pharmacists. Published by Direction of the Council of the Pharmaceutical Society of Great Britain. Cloth. Pp. 1568. London: Pharmaceutical Press, 72 Great Russell Street, W. C., 1911.

The preface states that "the chief aim of the work is the provision of accurate information for prescribers and dispensers . . ." The first edition appeared in 1907. The present edition is divided into two parts; the first, or dispensatory portion, comprising 1,100 pages, is devoted to monographs on drugs of vegetable and animal origin, and others dealing with chemical substances used in medicine. In the case of crude drugs the botanic or zoologic, geographic and commercial sources are stated. For all drugs the methods of collecting, preparing or manufacturing, their physical properties, actions and therapeutic uses, modes of administration, antidotal treatment (if poisonous), incompatibilities, etc., are tersely given. The principal preparations of the important drugs are described and attention is frequently called to the reputed composition of medicines sold under trade names. The second, or formulary portion, comprising 337 pages, is made up of formulas for a large number of medicinal preparations and is therefore similar, in a general way, to the National Formulary in this country. The quantities in the formulary are given both in centesimal and in imperial values. The book contains many tables and, besides the general subject index, also a therapeutic index such as is found in most dispensatories—a feature which, unfortunately, seems to appeal to many physicians. While the formulas given are many and excellent, and their intelligent use by physicians

in place of proprietary remedies represents a step forward in therapeutics, the physician who uses the codex should not accede to the evident intent of its compilers to favor the employment of such formulas in place of critical prescribing. While bibliographic references have been omitted in the interest of space, the work bears evidence of having been critically written and of having been revised to include recent pharmaceutical investigations. In these respects the work is much superior to the dispensatories published in this country and it should, therefore, be of correspondingly greater value to physicians.

CASE HISTORIES IN NEUROLOGY. A Selection of Histories Setting Forth the Diagnosis, Treatment and Post-Mortem Findings in Nervous Disease. By E. W. Taylor, A.M., M.D., Instructor in Neurology, Harvard Medical School, Boston. Cloth. Price, $3. Pp. 305. Boston: W. M Leonard, 1911.

The object of this book, the third volume of the Case History Series is to set forth in practical form the fundamental facts regarding the symptomatology, diagnosis, treatment and pathologic findings in the more frequent disorders of the nervous system.

A perusal of the case histories leads one to the conclusion that they are actual reproductions of clinic and private cases. One might say that they are more photographic than artistic pictures and consequently are accurate and instructive, but not entertaining. Of course, a Charcot is born only once in a century, but the book would not lose an *iota* by an attempt to imitate that master of medicine, who was also a master of style. The most logical use for this book would be, we believe, as a companion to the student of medicine who begins the study of clinical neurology. Two defects will always stand in the way of making these case histories popular with the general practitioner—the unpardonable brevity of treatment and the utter neglect of etiologic pathology.

DIE ERKENNUNG DER PSYCHOPATHISCHEN KONSTITUTIONEN (KRANKHAFTEN SEELISCHEN VERANLAGUNGEN) UND DIE ÖFFENTLICHE FÜRSORGE FÜR PSYCHOPATHISCH VERANLAGTE KINDER. Von Th. Ziehen, Geh. Med.-Rat, Direktor der Psychiatrischen und Nervenklinik der Kgl. Charité in Berlin. Paper. Price, 0.80 marks. Pp. 34. Berlin: S. Karger, 1912.

In this small brochure Professor Ziehen cites a number of interesting cases of psychopathically predisposed children who came under his observation. They cannot be educated in the schools for the feeble-minded, for they are intelligent; they must not be sent to an institution for juvenile criminals, for they are not criminals. From this class are drawn a large number of vagrants and prostitutes. The author makes an earnest plea for the erection of special schools in Germany for such children and believes that economy if not humanity should prompt such action. A similar need, no doubt, exists in this country.

TEXT-BOOK OF EMBRYOLOGY. By Frederick Randolph Bailey, A.M., M.D., Formerly Adjunct Professor of Histology and Embryology, College of Physicians and Surgeons (Medical Department of Columbia University), and Adam Marion Miller, A.M., Instructor in Anatomy, College of Physicians and Surgeons (Medical Department of Columbia University). Second Edition. Cloth. Price, $4.50 net. Pp. 672, with 515 illustrations. New York: William Wood & Co., 1911.

The principal criticism made on the first edition still holds good, viz., that the book is too pretentious for the student and too incomplete for the embryologist. The entire subject is presented in a most admirable manner, clearly and concisely. The plan of adding brief "practical suggestions" at the end of each chapter is commendable.

ANOMALE KINDER. Von L. Scholz, Direktor der Provinzial-Irren- und Idiotenanstalt in Kosten. Paper. Price, 8.60 marks. Pp. 442. Berlin: S. Karger, 1912.

The author, director of an asylum for the insane and idiots, has written a splendid book for educated persons of all classes. He addresses himself particularly to the parents and educators of abnormal children. The book contains little of interest to the neurologist, but general practitioners will find it entertaining and instructive. One need not hesitate to place this volume in the hands of any one having the care of children in masses. An English translation would be welcome.

Medicolegal

Physician Privileged in Diagnosing Pregnancy in Consultation Room With Sister of Patient Present

(Brice vs. Curtis (D. C.), 40 Wash. Law R. 103)

The Court of Appeals of the District of Columbia affirms, with costs, a judgment on a verdict directed for the defendant, a physician, who was sued for slander. The court says that, according to the plaintiff's testimony, she contracted a severe cold in March, 1909, from the effects of which she continued to suffer until about the 27th of May, when, accompanied by her sister, she went to the office of the defendant, to obtain treatment. The defendant gave her a prescription and directed her what to do in addition to taking the medicine. He also instructed her to return later if not relieved. Becoming no better, she returned on the 3rd of June, accompanied by her sister, "for medical advice as to the reason she did not have her usual sickness and for treatment in respect thereof." The defendant, on being informed by the plaintiff that she was no better, suggested that it would be necessary to examine her. After the examination he said: "You are in a delicate state and you are about three months gone." The plaintiff denied that such was her condition, whereupon the defendant, in support of his diagnosis, alluded to certain alleged differences between the plaintiff's physical development and that of her sister. The sister then suggested: "Doctor, probably she is at the changing point," whereupon the defendant asked the plaintiff's age and, on being informed that it was 38 years, said, in effect, that her condition was not attributable to that. After more argument the defendant asked: "Do you dispute my twenty-seven years of practice?" and, on being answered in the affirmative, said: "Well, come and stand before the *x*-ray to-morrow and I will prove that it is so, and, if I do not, I will give you $200." The plaintiff did not accede to the defendant's suggestion. She consulted another physician, whose medicine relieved her, but did not change her condition. She, of course, denied that she was pregnant.

The testimony of the sister did not differ materially from that of the plaintiff. She stated that the defendant, on the occasion of the second visit, invited the plaintiff into his private office, and that she, the witness, accompanied her sister, "at her request." The physician whom the plaintiff subsequently consulted testified that, in his opinion, she was suffering from change of life. The lady by whom the plaintiff had been employed as maid testified as to the plaintiff's reputation for chastity and, when another witness was offered on that point, counsel for the defendant announced that they were willing to concede that the plaintiff's reputation in that respect was good.

At the close of the evidence for the plaintiff the court, on motion of the defendant, ruled that the statements made were "privileged communications, and that there had been no sufficient publication shown to sustain a verdict for the plaintiff," and a verdict was accordingly directed for the defendant.

Under section 818 of the Code, the court goes on to say, it is made an offense wrongfully to accuse any woman of unchastity and the offender is declared to be liable to a civil action in damages by the party injured. But, generally speaking, where both the party making and the party receiving a communication have an interest in the subject-matter of the communication, the occasion is privileged and the question then remains whether there has been an abuse of the privilege; in other words, whether actual malice has been shown. The burden is of course on the defendant to establish an occasion of privilege, to prove that the circumstances were such as to warrant the statement of facts honestly believed to be true. When this burden is sustained, or when, on the admitted facts, it is plain that a duty rested on the party making the statements, the burden shifts and the plaintiff must then show actual malice.

Admittedly, the relation which the defendant sustained to the plaintiff on the occasion in question was of a most con-

fidential character. She appeared at his office with her sister and sought his advice as to her condition and treatment for the same. Each party was interested, and it was the defendant's duty honestly to express an opinion as to the plaintiff's condition. The occasion was therefore clearly privileged. The only remaining question was whether there was anything in the plaintiff's evidence which would warrant a finding that the defendant was not acting in good faith or was actuated by malice.

In this case the statements of the defendant were made in the natural course of his business and in response to the express and implied request of the plaintiff that she be informed as to the nature of her ailment. The sister, the only third party present, was there by the procurement of the plaintiff and the defendant was in no way responsible for her presence. She accompanied the plaintiff on each of the two occasions and, by request of the plaintiff, was present when the defendant made the examination. The defendant, therefore, had a right to assume that he could speak freely and frankly. Certain it was that unless he took advantage of the occasion for the purpose of vilifying the plaintiff and of making statements so far beyond the demands of the occasion as to indicate malice or lack of good faith, the presence of this witness, in the circumstances disclosed, in no way affected the situation.

There was no evidence whatever tending to show malice. On the occasion of the first visit the defendant expressed no opinion as to the condition of the plaintiff. On the occasion of the second visit he expressed no opinion until he had made an examination. While it must be assumed that the defendant was mistaken in his diagnosis, there was no evidence that the conditions on which he based that diagnosis did not reasonably admit of the conclusion reached. There was no evidence that the defendant bore the plaintiff any ill will. On the contrary, the fact that she consulted him indicated that their relations were friendly or, at least, not unfriendly. Having, after an examination, expressed his opinion as to the plaintiff's condition, it was but natural that the defendant should have sought to sustain that opinion. The conversation following the first expression of opinion was inspired by the plaintiff and her sister, and there was nothing in that conversation indicating a lack of good faith on the part of the defendant. His suggestion that the plaintiff submit to an *x*-ray examination clearly indicated his conviction that his diagnosis was correct.

Proper to Consider Injury to Nervous System

(Thompson & Starrett Co. vs. Warren (D. C.), 40 Wash. Law R. 117)

The Court of Appeals of the District of Columbia, in affirming a judgment in favor of Warren, the plaintiff, who was injured in a fall from a scaffold five or six feet from the ground, holds that it was not error to permit one of the medical witnesses to testify regarding the injury to the plaintiff's nervous system. The court says that the witness, after describing the appearance and condition of the plaintiff, including a hernia and the condition of his bowels and hemorrhages therefrom, proceeded to say that he was in a highly nervous state, and completely unstrung. The defendant objected to any evidence of nervous condition existing as a result of the accident. But the witness was permitted to say that the plaintiff was tremulous; easily moved to tears, could not concentrate his thoughts; could not touch his fingers in front with his eyes shut; had vertigo and pain in the back of his head; could not sleep; was forgetful; had lost weight; could not bend over to work; could not go on a scaffold, or to any height; would fall off; that these were results of his injuries. Cross-examined by the defendant, he said that the shock to the nervous system was caused by the fall. His brain was affected to a certain extent, and probably his spinal column was jarred. The nervous condition was the direct result of the fall. The court is of the opinion that no error was committed in admitting the evidence. In assessing damages for pain and suffering, mental and physical weakness, and the probable permanent continuation of the plaintiff's incapacity to labor, as the direct consequence of physical injuries received, the jury were entitled to hear and weigh all of the evidence relating thereto. This was quite different from charging them to assess damages for impairment of the nervous system as a result of the nervous shock, in addition to the damages for pain and suffering and permanent incapacity.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 4-7.

Alabama State Medical Association, Birmingham, April 16.
Amer. Assn. of Pathologists and Bacteriologists, Philadelphia, Apr. 5-6.
American Urological Association, New York City, April 2-4.
Arizona Medical Association, Bisbee, May 7.
California State Medical Society, Del Monte, April 16-18.
Georgia Medical Association, Augusta, April 17-19.
Louisiana State Medical Society, New Orleans, April 23-25.
Maryland Medical and Chirurgical Faculty, Baltimore, April 23-25.
Mississippi State Medical Association, Jackson, April 9-11.
New York State Medical Society, Albany, April 16-18.
South Carolina Medical Association, Columbia, April 16-18.
Tennessee State Medical Association, Chattanooga, April 9-11.

THE AMERICAN MEDICAL ASSOCIATION'S CONFERENCES ON MEDICAL EDUCATION, MEDICAL LEGISLATION AND PUBLIC HEALTH

Held in Chicago, Feb. 26-27, 1912

(Continued from page 813)

Federal Inspection of Dairy Products

DR. H. M. BRACKEN, St. Paul, Minn.: Meat, milk and butter are sources of danger, and, it seems to me, we should have federal inspection of these products because, as they are now sold, they are not confined to any state. It is an interstate question both as to the sale of the milk and butter, more so as to butter. Why should we have federal inspection of meat, and not federal inspection of dairy products? There is far more danger from the dairy products than from the meat. The dairy products are used in a raw state. Meat is used in cooked form. It would be easy to carry out proper federal inspection of dairy products because the federal government can cooperate with the various states.

DR. F. PARK LEWIS, Buffalo, discussed the campaign for conservation of vision.

Resolutions Adopted

The Committee on Resolutions, through its chairman, Dr. B. M. Caples, Wisconsin, recommended the passage of the following resolution and the conference concurred unanimously:

1. The resolution offered by Dr. W. A. Evans:

WHEREAS, The American Medical Association has gone on record for an active support of health legislation: therefore be it

Resolved, That this meeting endorse the position taken by the American Medical Association in its unanimous vote at Los Angeles to support pending national health legislation; that it endorse the action of the House of Delegates in instructing the Council on Health and Public Instruction, the Editor of THE JOURNAL and the Board of Trustees to use every endeavor to secure the passage of such national legislation.

2. The resolution offered by Dr. Cressy L. Wilbur:

WHEREAS, The public health is essential to the public welfare and the Government of the United States, by a formal invitation extended by the Secretary of State in pursuance of a resolution of Congress, has pledged itself to the success of the International Congress of Hygiene and Demography, to be held in Washington, September, 1912; and

WHEREAS, Immediate favorable action by Congress in the way of granting an adequate appropriation for the congress and providing for a suitable government exhibit is necessary in order to secure its success; therefore be it

Resolved, That the Council on Public Health and Instruction of the American Medical Association at once cause the importance of the congress for the promotion of the public health of the United States and the need for a prompt appropriation to insure its success to be brought to the attention of the Congress of the United States.

3. Dr. Moline's resolution in modified form:

WHEREAS, At present the Council on Health and Public Instruction has a large amount of material which can be used in drafting a model practice act, this conference requests the Council on Health and Public Instruction to prepare a model medical practice act as soon as possible.

4. Regarding Dr. Woodward's amendment to Dr. Moline's motion, that the Board of Trustees be requested to make such appropriations as may be necessary for the work of any committee that may be appointed, the Committee on Resolutions recommends that this be referred to the Council on Health and Public Instruction with the endorsement of the conference.

5. Regarding the resolution of Dr. E. J. Goodwin, the Committee on Resolutions recommends that the Council on Health and Public Instruction be asked to appoint a committee to investigate the present status of vaccination and smallpox statistics, and that this committee also be instructed to prepare or have prepared a model bill on vaccination for such states as may desire to adopt it.

6. *Resolved*, That this conference request the Council on Health and Public Instruction of the American Medical Association to take steps for the organization of a Committee on Vital Statistic Legislation to consist of representatives from the American Medical Association, American Public Health Association, the American Bar Association, Conference of Commissioners on uniform state laws and the Bureau of the Census, for the purpose of considering any changes or modifications which may be necessary in the present model law for the registration of vital statistics.

7. Regarding the recommendation of the secretary for the establishment of a Council on Public Health, the Committee on Resolutions recommends that this suggestion be endorsed and that the Committee on Health and Public Instruction be requested to create a Council on Public Health to be made up of representatives of state boards of health and such municipal departments of health as may send representatives.

A Program for Local and State Organizations for the Suppression of Tuberculosis

DR. J. W. PETTIT, Ottawa, Ill.: An effective program against tuberculosis demands a clear conception of the vast extent of the campaign, concentration of effort, through organization, and harmonious coordination of measures. To this end there must be a systematic campaign of education along scientific and economic lines. The means for prevention are to destroy the sputum of the victim of the disease, disinfect all places inhabited by tuberculous patients, avoid contaminated foods, educate the controllable, and segregate the uncontrollable patients, and make public provision for the care and treatment of the indigent, more particularly those in the advanced stage of the disease. This can only be accomplished by a systematic and comprehensive campaign of education which will lead to the notification and registration of all cases. The first step in this program is the organization of a local society which shall give direction to and have full charge of the work for the territory for which it is organized. This may be a city or county according to population and other local conditions. Care should be taken not to make the unit of representation too large, as the small unit is usually more efficient. The work of this society should be confined in the beginning at least to purely educational work.

Of the educational methods employed exhibits easily take first rank. These may precede or follow the organization of local societies, depending on the extent of local interest. Tuberculosis exhibits as a means of popular education is one of the most active now known. These exhibits while of professional interest to physicians are intended more for the education of the public. Properly arranged, they should be made to show very graphically the extent and nature of the disease; conditions under which the disease germs spread; how it spreads; how the disease is cured and prevented; and also tuberculosis in animals.

The segregation of every consumptive removes a center of infection, and if treatment is begun in time, 75 per cent. of those afflicted are restored to health and usefulness. Thus, by a process of eliminating centers of infection in all cases, and restoration to usefulness in a majority, the burden will become less and less each year until the disease is practically eliminated. The treatment consists in living out of doors, a carefully selected diet, regulation of exercise, and medication for the improvement of nutrition. The patient must have nourishing food, properly selected; tender care and nursing; pleasant surroundings, and everything that will tend to take his mind from himself and his terrible affliction. Climate alone does not cure.

Another serious obstacle is the assumption that the treatment can be carried out successfully in the home. All the reasons usually adduced are so very plausible that any attempt to combat them by argument is useless. The facts of experience, however, are all against this method, and is the only reply that can be made when this phase of the subject is under discussion.

The work of the sanatorium is not only curative, but educational. The daily sanatorium life is an education in itself. In addition to the requirements of the treatment proper, patients are instructed in personal hygiene, home sanitation, and prevention of tuberculosis, and rules laid down for their guidance after leaving the institution.

DR. WILLIAM C. WOODWARD offered the following, which was carried:

Resolved, That the Council on Health and Public Instruction be instructed or requested to use its best endeavors toward bringing about consolidation of the numerous health organizations, and in the event of a failure to effect such consolidation, that it use its influence to bring about intelligent, economic and efficient coordination of their efforts and the efforts of the American Medical Association.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Twenty-Second Annual Meeting, held in Chicago, Feb. 28, 1912

The President, DR. WILLIAM P. HARLOW, Boulder, Colo., in the Chair

Officers Elected

The following officers were elected: president, Dr. Egbert LeFevre, University and Bellevue Hospital Medical College, New York City; vice-president, Dr. F. C. Waite, Western Reserve University, Cleveland; secretary-treasurer, Dr. Fred. C. Zapffe, University of Illinois, Chicago; Executive Council, Dr. William J. Means, Starling-Ohio Medical College, Columbus, Ohio; Dr. Randolph Winslow, University of Maryland, Baltimore; Dr. Charles R. Bardeen, University of Wisconsin, Madison; Dr. J. A. Witherspoon, Vanderbilt University; Dr. W. P. Harlow, University of Colorado; the president, and the secretary.

The Function of the Association

DR. WILLIAM P. HARLOW, University of Colorado: Of greatest importance at this time is the establishment of unity between the three great bodies now working with a common purpose—the Council on Medical Education of the American Medical Association, the Federation of State Medical Boards and this association. Each of these associations has a precedence in some one respect. The state boards can enforce certain preliminary requirements and a certain minimum of ability among practitioners. This association will confine its activities more and more to matters of pedagogy and getting medical schools to conform to ideal conditions. The Council on Medical Education will, as time goes on, confine itself more generally to the correlation of the other departments with regard to the general practitioner. The entire scheme of education needs to be revised so that primary work will be given from the ages of 6 to 12; secondary work from 12 to 18; college preliminary work from 18 to 20, and then professional study. This can be accomplished by Americanizing the German educational system. Preliminary college requirements for the student who will study medicine should include English, Latin, physics, biology, including comparative anatomy, inorganic chemistry and enough German to read the language fluently. The college preparatory work is simply premedical.

As for specialization in medicine, the one function of the medical school is to turn out doctors, general practitioners, who are capable of doing all sorts of work with credit. The undergraduate curriculum should supply the necessary knowledge and training. Specialization should come after graduation and not before. The movement to include a fifth or hospital year in the medical curriculum raises questions with regard to the relations of the medical school to the hospitals in which such time should be spent. What should be demanded to make such positions desirable to the students? The question should be considered carefully by a committee. It should not be a special training, because that must be taken care of by a postgraduate training and should be recognized by a special degree. Such courses should be pursued for two years, and on presentation of a thesis based on original work done in the department the applicant becomes a candidate for his special degree. Courses may be arranged during the summer and admission must be based on previous education.

The advance made in experimental medicine, particularly serology, makes it necessary for the medical school to add a department of experimental medicine. The college must be prepared to take over the state departments of bacteriology, pathology, water analysis and hygiene to the best interests of the student as well as to the state. Extension work is also deserving of more attention than has been given to it. Popular lectures should be held under the supervision of the medical school. Instruction should be given to physicians in laboratory diagnosis, serotherapy and serodiagnosis, and such clinical work as can be done under state supervision by the medical school might well be placed under the charge of the department of extension work. Such work cannot fail to prove effective and valuable to all concerned.

General Examinations in a Medical School

DR. HENRY A. CHRISTIAN, Harvard Medical School, Boston: Medical schools have tended toward too great rigidity of curriculum with too many separate examinations, resulting in leaving too little to the initiative of the student, and in producing students too crammed with facts, too little able to think and to apply their knowledge. Our new plan of examination is as follows: Written tests are done away with. In their place practical examinations are conducted by the individual departments. The student chooses whether he will take the practical examination at the end of each course or near the time of the general examination. Practical examinations must be completed satisfactorily before the general examination can be taken. The marks made in the practical examinations make up 40 per cent. of the grade of the general examination. General examinations, partly written, partly oral, are held at the end of the second and fourth years. The subjects comprised in the first examination are anatomy, histology and embryology, physiology, biologic chemistry, pathology and bacteriology. An elementary knowledge of physics, inorganic and organic chemistry and biology is assumed. The subjects comprised in the second examination are preventive medicine and hygiene, materia medica and therapeutics, medicine, surgery, pediatrics, obstetrics, gynecology, dermatology, syphilis, neurology, psychiatry, ophthalmology, otology and laryngology. No student who fails to pass a general examination may repeat it within the calendar year in which he failed. No student is permitted to begin the work of the third year until the first general examination has been passed.

The written part of each general examination consists of questions selected by the examination committee (appointed by the president) from a list of questions submitted by the department concerned. The time is divided into periods of three hours each. The answers to the questions are graded by the committee on examinations. This grade will make up 40 per cent. of the final mark for the general examination.

The oral part is conducted by boards of five members appointed by the committee on examinations, on each of which for the first general examination there must be at least one representative of the clinical branches, and for the second general examination at least one representative of the laboratory branches. The grade given on the oral part of the examination will make up 20 per cent. of the final grade on the general examination. Both general examinations are required of all candidates whether they have taken all their work at Harvard or not. By this plan the written examinations for the entire course are reduced to two, to which are added two oral examinations, both planned to determine the student's power of comprehension, judgment and power rather than his detailed information.

DISCUSSION

DR. EGBERT LEFEVRE: Does the head of the departments hold any examinations?

DR. CHRISTIAN: The practical examination is under the head of the department, but the committee has a right to change, or determine, its character if they do not deem it satisfactory. The head of the department has to submit his plan of examination to the committee for approval.

DR. J. R. GUTHRIE: Is there any provision in this system for determining what work the student has done, or any record kept of attendance, or any written report of his work; for example: the number of surgical, medical, or obstetrical cases he has seen? Does that enter in at all?

DR. CHRISTIAN: There has been no change made in that regard at Harvard. No attendance is ever taken in any course in the medical department at the present time. Whether men take given courses or not is determined by the practical examinations, but they are not required to have a certain number of obstetric cases, or to have participated in a certain specified amount of work in a particular department. There are several requirements in the degree, and these requirements are in no way changed by this plan, which is that followed by the University of Chicago to have examinations at the end of a certain specified period.

DR. JOHN M. DODSON: I am much interested in the plan which Dr. Christian has outlined. It seems to me an excellent one to have tried out, and I hope that Harvard University will not run up against any state board that states definitely what kind of an examination the student shall have. This will do away with the multiplicity of examinations which are not now so prevalent in many of our schools. Some years ago a friend happened into a class room where a teacher who is very fond of having examinations was holding one, and he said: "There he is, still at it, pulling them up by the roots to see if they are growing," and I have come to the conclusion that these examinations are just about as harmful to the students as it would be to pull plants up by the roots to see if they are growing. We have no stated examinations. We have hit on a plan that leads us to a very close supervision of the students' work, particularly that of the poor students. We have a committee on promotion which meets as soon after the new quarter begins as the records are received from the registrar. All students conditioned, or nearly up to the passing line, are gone over.

The most difficult point I foresee is the extreme difficulty of getting some instructors, particularly those not giving full time to the work, to keep accurate records. They should be able to tell, without an examination, what kind of work the student has done. At the end of a period the instructor should be able to say: John Smith is entitled to grade A, or Bill Jones is entitled to grade B without the harrowing process of a written examination.

DR. J. A. WITHERSPOON: I know of one or two instances in which the whole faculty have combined to make up the examinations. I know of another in which five professors taught surgery in a college and each man held an individual examination. It is simply cruelty to animals. I do hope that some plan can be formulated by which we can get rid of a great many of these examinations. They do not really demonstrate much about the boy. It is the man who teaches him daily who can evaluate his work, and he ought to be able to grade him.

DR. EGBERT LEFEVRE: One of the reasons why our methods have been as they are has been our pernicious and ever-present method of examinations. Practically, when a student enters college his first object is to pass the examinations. The multiplicity of examinations has been the one thing that has de-

manded that the medical education assume the definite form that it has. We have, therefore, before us, as teachers, this handicap in pedagogy, and as long as this method prevails, our pedagogy must depend on these examinations. Our teachers can do no better work than to study the curricula of other schools, as well as that of their own school, to see how the powers of observation of the student can be improved.

I have for three years made a study of the curriculum of our school, and I have found that whenever new schemes have been presented the students do not take kindly to them. The student body becomes restless. They say, "Is this preparing us for examinations?" and we find that their whole thought is centered on the examinations and the best teacher is the one who can give them the greatest number of facts that they can memorize and have ready at hand. So I believe that the faults that have crept into our teaching methods have been due to the multiplicity of examinations and the method of conducting them.

The Improvement of Medical Teaching

DR. C. M. JACKSON, University of Missouri: Efficient teaching requires a clear view of the ultimate aim, which in medicine is to train efficient practitioners. To accomplish this aim rational methods of teaching should develop in the student self-activity in observation, reasoning and action. Great improvement would result if medical teachers would study more carefully their educational methods. The younger teachers might take work in the schools of education connected with the various universities. Those unable to do this should, at least, study the principles of pedagogy. They are the same for elementary, advanced and professional education. The adoption of more efficient methods of teaching would probably enable us to gain the equivalent of a whole year within the time now devoted to the four years' curriculum. Uniform methods of teaching are neither necessary nor desirable; but all efficient methods of teaching must be based on established principles of pedagogy.

Efficient teaching requires three essential conditions: (1) Complete mastery of the subject-matter by the teacher; (2) clear notion of the aim of teaching; (3) well-chosen methods of accomplishing this aim. The second and third are those most often overlooked.

The primary aim of medical education should be to train efficient practitioners, one who is able to observe accurately, think clearly and act wisely. Therefore, the instruction must be adapted to the student's nature and learning capacity. All education really worth while is based on self-activity. In developing this self-activity, the student's interest and attention must be aroused. He must be made to realize the bearing of this work on his activities later in life. Because of limited time only the practical facts, those that are of utility in medicine should be taught, combined with a theoretical because the latter contribute to the coherence of the various practical facts. Both are necessary. The best methods of teaching utilize both. Each subject should be taught from the theoretical, scientific point of view, but at the same time its practical application should be kept constantly in mind. For instance, anatomy should be taught as a special branch of biologic science. The facts in anatomy that are of direct intrinsic value in physiology, pathology and clinical medicine should be chosen. A working knowledge should be given the student.

Each teacher must understand the curriculum as a whole. The laboratory man must be familiar with clinical work and the clinician must be familiar with laboratory work. There must be understanding and cooperation between the teachers of the various subjects of the course. The student must be made to feel that each subject contributes an essential part in training him for the desired end. He must observe, think and act for himself. Fundamental data should be acquired by observation and not by listening to lectures. For instance, give the clinics first and the lectures later. Let the student observe first, see for himself. It facilitates comprehension and teaches self-activity. The ideal plan is for the student to work out everything for himself by discovery. Never tell him anything that he can observe for himself; never draw a conclusion or solve a problem which he can be led to reason out for himself; never do anything for him that he can do for himself.

So far as practicable the ideal method should be applied for the purpose of training the student to self-activity, in developing his ability in observation, reasoning and action. The application of the generalizations reaches by observation, plus reasoning, while essential in every subject, is especially characteristic of clinical work. The student should learn by doing.

DISCUSSION

DR. EDWARD JACKSON, Denver: The greatest obstacle to self-activity of students is to have their mental energies and mental mechanism monopolized by something thrust on them from without.

The first mistake of medical educators is their insistence, that, as the first requirement, the teacher shall know his subject. I would place as the first qualification his ability to know what is in the mind of the student, what has been taking place there during his previous education and what is actually taking place there at the time. To know that is an enormous help to the student.

DR. PAUL G. WOOLLEY: Dr. Jackson of Denver calls attention to one of the most fundamental points of the remarks of Dr. Jackson of Missouri, that is, coordination of knowledge. Anatomy, for instance, has been taught from the standpoint of anatomy, not from the standpoint of surgery or pathology. To be sure, we have had surgical anatomy, and pathologic anatomy, but they have come after the course in general anatomy itself. The course in anatomy could be helped by coordination of the professors in surgery and medicine. In finding the optic disk, students could be taught why they are finding the optic disk, what its relation is to other parts of the eye, etc. In teaching orthopedic surgery, it would not be out of place to have an orthopedic surgeon come around during the class and speak of the importance of learning the anatomy of the joints.

It seems to me that we could raise the efficiency by coordination of the courses. Not only should we have better observation on the part of the students to start with, but we should bring the departments closer together, and in this way a great waste of time could be obviated. Much time could be saved to gynecology and to pathology, and to anatomy and surgery, and to many other branches by coordination of the studies and a good deal of the material that now goes into these studies could be weeded out.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Philippine Journal of Science, Manila

November, VI, No. 5, pp. 315-421

1 *Addison's Disease and Adrenal Tuberculosis. B. C. Crowell, Manila.
2 Rice as Food; Investigation of Nitrogen and Phosphorus Metabolism on Diet Consisting Principally of Rice and Other Vegetable Foodstuffs. H. Aron and F. Hocson, Manila.
3 *Effect of Ultraviolet Rays on Amebæ; Use of These Radiations in Sterilization of Water. W. P. Chamberlain and E. B. Vedder, U. S. Army.
4 *Etiology of Beriberi. W. P. Chamberlain and E. B. Vedder, U. S. Army.
5 Study of Arneth's Nuclear Classification of Neutrophils in Healthy Adult Males, and Influence Thereon of Race, Complexion and Tropical Residence. W. P. Chamberlain and E. B. Vedder, U. S. Army.
6 So-Called X-Bodies as Artefacts in Glass-Slides. W. P. Chamberlain and E. B. Vedder, U. S. Army.

1. **Addison's Disease and Adrenal Tuberculosis.**—The two cases of tuberculosis of the adrenals which Crowell has had the opportunity of studying in Manila were accidental autopsy findings in which the clinical diagnosis was generalized tuberculosis. Both of these occurred in Filipinos, thus raising the question as to the possibility of making the clinical diagnosis of Addison's disease in dark races. In these cases no excessive pigmentation of the mucous membranes or of the skin could be observed on very close examination on the autopsy

table, aside from two isolated dark spots on the tip of the tongue of one of the cases. It was considered at the time that these might have occurred from extraneous sources, such as the teeth, and microscopic examination was of little assistance, since the pigment involved not only the epithelium but the corium as well, and might have reached the part from either direction. In both cases the adrenals were destroyed by tuberculosis and the semilunar ganglia contained chromaffin. In both of these, other endosecretory glands were the seat of pathologic processes. In one, hyperplasia of the islands of Langerhans was associated with adrenal and thyroid tuberculosis; in the other, one parathyroid was cirrholic.

3. **Effect of Ultraviolet Rays on Amebæ.**—The authors' experiments taken as a whole demonstrate that in a water-supply the amebæ, whether motile or encysted, may be killed by a comparatively short exposure to ultraviolet rays. Balantidia, also, appear to be destroyed by the same agency. These facts afford a very potent argument in favor of the use of these radiations in the practical sterilization of water in the tropics.

4. **Etiology of Beriberi.**—Progress is reported by Chamberlain and Vedder in the identification of the neuritis-preventing substance contained in the extract of rice polishings. Of 1.34 per cent. total solids contained in this extract, 0.03 per cent. was ash. This they believe to be negligible since it consists entirely of inorganic constituents, chiefly of lime, magnesia and potassium carbonate. They have tried salts of calcium, magnesium and potassium and found them wanting. Nitrogenous matter comprises 0.04 per cent. of the total solids. Of this only 0.02 per cent. was present in the diffusate, which has been shown to contain the neuritis-preventing principle, and the remaining 0.02 per cent. can be eliminated because it remained in the dialysate which failed to prevent neuritis. The 0.88 per cent. sucrose is of no importance. Combining these unimportant substances and subtracting them from the 1.34 per cent. of total solids, they find that there is only 0.4 per cent. remaining. The neuritis-preventing principle must, therefore, be sought for in this 0.4 per cent. of solid matter and must be a substance that is dialyzable, that is soluble in water, in 95 per cent. alcohol, and in 0.3 per cent. hydrochloric acid, which is easily decomposed by heat and which possesses a strong affinity for bone black. The same substance or a similar substance is also contained in a decoction of ordinary white beans. Bodies corresponding to this description are found among the decomposition products of the proteins.

Annals of Otology, Rhinology and Laryngology, St. Louis

December, XX, No. 4, pp. 751-1020

7 Spread of Bacterial Infections from Nasal and Nasopharyngeal Cavities by Way of Lymph Channels. A. L. Turner, Edinburgh.
8 Ear and Social Hygiene. P. Fridenberg, New York.
9 Relation of Age to Tonsillar Infection. H. A. Barnes, Boston.
10 Cartilaginous Tumors of Larynx. J. J. Carroll, Baltimore.
11 Case of Multiple Foreign Bodies in Smaller Bronchi. F. E. Hopkins, Springfield.
12 Contribution to Passive Immunization in Diphtheria of Upper Respiratory Organs. H. L. Wagner, San Francisco.
13 Circulatory and Respiratory Reflexes and Neuroses from Upper Air Tract. W. S. Bryant, New York.
14 Pneumococcus Infections of Throat. H. Hays, New York.
15 Methods of Giving Anesthesia in Operations on Upper Respiratory Tract. J. T. Gwathmey, New York.
16 Nasal Accessory Sinuses; Different Methods of Treatment. L. M. Hurd, New York.
17 Treatment of Mastoid Wound Following Operation. H. B. Brown, New York.
18 Insertion and Seat of Rhinopharyngeal Fibromata. D. Jacques, France.
19 Conservative Radical Operation on Middle Ear. Stacke, Erfurt, Germany.
20 Summary of Annual Reports of Tuberculosis Sanatoria in United States of America and Canada. J. W. Gleitsmann, New York.

American Journal of Diseases of Children, Chicago

March, III, No. 3, pp. 133-208

21 *Use of a Simple Duodenal Catheter in Diagnosis and Treatment of Certain Cases of Vomiting in Infants. A. F. Hess, New York.
22 *Study of Cerebrospinal Fluid and Blood in Acute Poliomyelitis. G. Draper and F. W. Peabody, New York.
23 Atrophy of Infants. A. Czerny, Strassburg.

21. **Vomiting in Infants.**—During the past few months Hess has made use of an infant duodenal catheter (Nelaton soft rubber, 8 F.) on more than 200 infants of various ages, suffering from a great variety of disorders. In order to demonstrate beyond all doubt that the catheter gains access to the duodenum, he resorted to radiographic pictures. They showed the tube to be well within the intestine; in fact, in one instance it semed to have passed even beyond the confines of the duodenum. The catheter is passed in the same way as the ordinary stomach tube. By means of the catheter one can readily diagnose pylorospasm, and differentiate it from vomiting due to other causes. In the case of spasm one meets with a persistent resistance encountered at the same point whenever it is attempted to advance the catheter; this is frequently accompanied by irritability of the pylorus. The spasm may be felt to relax suddenly and enable us to enter the intestine. Marked pyloric stenosis can be diagnosed from the failure to transgress the pylorus after repeated attempts. A mild degree of stenosis, so slight as to allow of the passage of the catheter, cannot be differentiated from simple spasm. Cardiospasm frequently accompanies pylorospasm. This sign has been frequently overlooked, due to the too forcible insertion of the stomach tube. If a soft rubber tube is introduced into the esophagus, it may be found even impossible to enter the stomach. Frequently as the result of this spasm the food does not enter the stomach, being checked at the cardia. The catheter is of value in the therapy of pylorospasm. Its passage through the pylorus seems to relax the ring and in this way to diminish the vomiting. It would seem of advantage to test this method of dilating the pylorus, and to pass the catheter frequently in such cases. Another form of therapy consists of duodenal feeding. Radiographs show that this is feasible. It should be reserved for such cases as do not retain food given by gavage, and the food should be given slowly and in not too large amounts. In cases of this kind it has been found of great value.

22. **Cerebrospinal Fluid and Blood in Acute Poliomyelitis.**—To sum up, Draper and Peabody found in the blood of patients with poliomyelitis a constant and marked leukocytosis. In several instances the count has been as high as 30,000. In only one case has there been a definite leukopenia. Besides the increase in total cells, there has been an equally constant increase of polymorphonuclears of 10 to 15 per cent. above the normal, and a diminution of lymphocytes of 15 to 20 per cent. The other forms of leukocytes have shown no abnormalities.

American Journal of Public Health, New York

January, II, No. 1, pp. 1-66

24 Importance of Municipal Sanitary Inspection for Abatement of Nuisances. E. C. Levy, Richmond, Va.
25 Extermination of House-Fly in Cities; Its Necessity and Possibility. C. E. Terry, Jacksonville, Fla.
26 How Confederate Army Was Vaccinated. C. W. P. Brock, Richmond, Va.
27 Seasonal Variation in Bacterial Count of Oysters. F. P. Gorham.
28 International Classification of Causes of Sickness and Deaths. J. Le-Roy y Cassa, Havana, Cuba.

California State Journal of Medicine, San Francisco

March, X, No. 3, pp. 85-130

29 *Recent Advances in Regional (Local) Anesthesia. L. Ploessser, San Francisco.
30 *Management and Treatment of Pulmonary Tuberculosis. R. A. Peers, Colfax.
31 *Chemistry of Preparing Salvarsan for Injection and Simple, Rapid Method for Its Preparation. G. Gillman, San Francisco.
32 Variations in Tonicity of Abdominal Musculature and Their Significance. J. L. Lobse, Oakland.
33 Treatment of Vascular Nevi with Carbon-Dioxid Snow. G. H. Mize, San Francisco.
34 Medical Laws of California. C. F. Lee, Santa Rosa.
35 Case of Partial Tremulous Scrivner's Palsy. T. A. Williams, Washington, D. C.
36 Very Large Calculus. M. Krotoszyner, San Francisco.
37 Rabies and Pasteur Treatment. F. I. Lackenbach, San Francisco.
38 Anesthetics; Methods and Indications. F. D. Bullard, Los Angeles.

29. **Regional Anesthesia.**—Ploessser contends that extensive operations involving the mouth, the tongue, the jaws and the lips in mentally normal adult patients should be performed under regional anesthesia. The hand and foot may be easily and simply anesthetized; operations on these members should be performed under regional anesthesia. Skin is easily and

simply grafted under regional anesthesia, which is the anesthesia of choice. Many extensive operations on the chest, abdomen and extremities may be performed under regional anesthesia. Injection of the intercostal nerves with osmic acid or similar substances may be of use in certain cases of inoperable cancer of the breast. The trial of local anesthesia in reducing deformity is urged in certain cases of fracture; this may prove especially valuable to the general practitioner. Local anesthesia should not be forced on unwilling patients; its use should not be tried in unsuitable cases; its limitations should be strictly observed.

30. **Tuberculin in Pulmonary Tuberculosis.**—In summing up his remarks on the use of tuberculin Peers says: Tuberculin is of undoubted value. The principal proof of this is that those who use it the most are satisfied of its value. On the other hand, tuberculin does not cure tuberculosis. It probably does not make so much difference what particular make of tuberculin you use, providing you get a product manufactured by a reputable firm. The principal thing is how it is used. In other words, it is not the preparation but the manner of using. Tuberculin should not be used by the inexperienced, who have only a text-book knowledge of the drug, any more than a capital operation should be performed by anyone who has merely a text-book knowledge of surgery. Tuberculin should not be used in febrile cases, in which the temperature exceeds 100, except in extremely minute doses. The ordinary stock dilutions 1, 2, 3, 4, 5, should be supplemented by much weaker dilutions. No. 1, which contains .01 mg. per c.c., is too potent for commencement. Tuberculin should not be measured as so many minims of a given dilution; it should be given with a special syringe graduated to 1-100 of a c.c., and the dose calculated in fractions of a mg. Patients should not be given tuberculin who do not keep an accurate daily record of their symptoms and where they cannot be given careful personal supervision, preferably daily. Patients should not be given tuberculin where they have to come miles by train to receive the dosage, or where they are engaged in laborious undertakings. Much of the benefit from tuberculin administration lies in the fact that such patients are under daily supervision over a correspondingly extended period. It is not fair to lay at the door of tuberculin all the accidents that occur while the patient is under treatment, or to ascribe all the benefits during its use to other factors. Nor is it fair to ascribe all the benefit to tuberculin and to blame the reactions to other causes. It is best in giving tuberculin to avoid even moderate reactions. These will undoubtedly sometimes occur even under most careful treatment. If disregarded, disaster will follow. On the other hand, patients will sometimes make more rapid recovery after a pronounced reaction than at any previous time. In giving tuberculin, if in doubt as to the advisability of increasing the dose, don't increase.

31. **Chemistry of Preparing Salvarsan for Injection.**—The detailed technic of the method, which in Gillman's hands has given very satisfactory results in the preparation of a large number of doses, is as follows: A glass-stoppered, wide-mouth, 30 c.c. flask is employed, of a depth that should the preparation be administered intramuscularly, will permit the hypodermic needle used to reach its bottom. A wide mouth prevents any "606" adhering to the sides of the neck when emptying the contents of the ampule into the flask. It is convenient to have a flask of such depth that it should permit the needle of the syringe used to take up the last portions of the preparation directly from the flask. Boil about 10 c.c. of distilled water in a test tube and pour the boiling water into the flask. The salvarsan is next dusted on the water and dissolved by vigorous agitation for a few seconds. To this aqueous solution of the salvarsan is added the required quantity of the standard solution of NaOH (3.6 per cent.), i. e., 1 c.c. for each .1 gm. of salvarsan employed, if the neutral suspension of the precipitated base is desired. The flask is again well shaken after the addition of the NaOH and the preparation is next made up to the proper quantity with normal salt solution, usually 20 c.c. if to be injected intramuscularly and 100 to 250 c.c. if intravenously.

Bulletin of Manila Medical Society, P. I.

January, IV, No. 1, pp. 1-48

39 Medical Conditions in American Samoa. G. F. Cottle, U. S. Navy.
40 Medical Conditions in Guam. H. E. Odell, U. S. Navy.

Journal of Ophthalmology and Oto-Laryngology, Chicago

February, VI, No. 2, pp. 65-69

41 Detection of Alleged Visual Defects. A. H. Andrews, Chicago.
42 Trachoma Treated by Jequirity. C. W. Hawley, Chicago.
43 Surgical Treatment of Exophthalmic Goiter. A. J. Ochsner, Chicago.

Cleveland Medical Journal

February, XI, No. 2, pp. 81-160

44 Analysis of 500 Consecutive Unselected Invasions of Peritoneal Cavity. R. E. Skeel, Cleveland.
45 Purification of Water by Filtration; Mechanical Considerations. R. W. Pratt, Cleveland.
46 Water Filtration from Sanitary Standpoint. R. G. Perkins, Cleveland.
47 *Case of Phlebitis Migrans. J. Phillips, Cleveland.
48 Privileged Communications Between Physician and Patient. B. A. Gage, Cleveland.

47. **Phlebitis Migrans.**—The point of interest in Phillips' case was the occurrence of phlebitis in so many different veins in a patient of rheumatic or possibly gouty tendency without much constitutional disturbance, and the subsiding of the phlebitis after the administration of the vaccine. Phillips does not say whether this was a coincidence or not, and yet he thinks it is very significant that the herpetic eruption in his mouth, from which he had never been entirely free for a period of fourteen years, disappeared after the first injection of vaccine and has not since returned. The vaccine was made from cultures from the unbroken vesicles in the mouth.

Canadian Medical Association Journal, Toronto

February, II, No. 2, pp. 89-172

49 Chemical Basis of Life. D. F. Harris.
50 Luetic Cirrhosis of Liver. E. J. Mullally, Montreal.
51 Ammonia Coefficient in Case of Severe Vomiting in Pregnancy. A. W. M. Ellis, Toronto.
52 Angioma of Larynx. G. S. Ryerson, Toronto.
53 Chronic Myocarditis. J. Third, Kingston, Ont.

New Orleans Medical and Surgical Journal, La.

March, LXIV, No. 9, pp. 641-724

54 *Extra-Uterine Abdominal Pregnancy. I. M. Calloway, Shreveport, La.
55 Toxemia of Pregnancy; Its Cause, Nature and Treatment. O. W. Cosby and R. H. Blackman, Monroe, La.
56 Various Anesthetics as Applied to Obstetrical Work. A. C. King, New Orleans.
57 Injuries to Parturient Canal During Labor. C. N. Chavigny, New Orleans.
58 Perineal Ureterolithotomy in Male. M. Souchon, New Orleans.
59 Nutrition in Infancy. A. P. Crain, Shreveport, La.
60 Epidemic Cerebrospinal Meningitis. E. M. Dupaquier, New Orleans.

54. **Extrauterine Abdominal Pregnancy.**—At the time of the hemorrhage Calloway's patient was one and a half or two months pregnant. As the fetus was alive, and the woman in good condition, he delayed as long as possible abdominal section, hoping to let the child go to viable age. He opened the abdomen. The abdominal wall was very thin; he found a very friable placental sac, which ruptured on handling, and a fully developed child was delivered; the sac was almost empty of amniotic fluid, and child as well as the walls of the sac were pasted with meconium. The placenta was attached to back of both broad ligaments and posterior surface of uterus. There were no adhesions to any abdominal viscera. On examination the tubes and ovaries showed no evidence of previous rupture. The uterus was very much enlarged and so great were the attachments of the placenta, that he lifted the entire mass out of the abdomen and removed uterus, tubes and ovaries below the attachments. The abdominal wound was closed in the usual way and patient had an uninterrupted recovery.

Southern California Practitioner, Los Angeles

February, XXVII, No. 2, pp. 45-92

61 Treatment of Fractures. W. W. Richardson, Los Angeles.
62 Small-Pox Epidemic. E. D. Ward, Los Angeles.
63 Strongyloides Intestinalis; Amebic Dysentery. R. D. Kennedy, Globe, Ariz.
64 Intussusception. J. C. King, Banning, Cal.
65 European Observations. G. L. Cole, Los Angeles.
66 History of Medicine in Sixteenth Century. E. Wing, Los Angeles.
67 Illegal Practice of Medicine in Los Angeles. H. T. Morrow, Los Angeles.

Laryngoscope, St. Louis

February, XXII, No. 8, pp. 81-164

68 Vestibular Apparatus and Central Nervous System. R. Barany, Vienna.
69 Early Development of Ear. L. K. Guggenheim, St. Louis.
70 Eighty-One Cases of Inflammation of Frontal Sinus; Comparative Study. G. La Richards, Fall River, Mass.
71 Latent Sinusitis; Symptoms and Results, Immediate and Remote. G. F. Cott, Buffalo.
72 *Epiglottidectomy: Rational Treatment of Epiglottidean Tuberculosis. L. B. Lockard, Denver.
73 New Instruments. A. Braun, New York.

72. **Epiglottidectomy.**—As a purely palliative procedure, in advanced cases, Lockard says the worth of epiglottidectomy has been repeatedly proved. Of 151 cases capable of exact analysis and accurately observed, the pain was relieved in 127, or 84.10 per cent. There were sixteen cases that would have been classed as favorable if the epiglottis had not been involved, and of these, 100 per cent. were completely relieved; ninety-five would have been considered hopeless even without the epiglottidean disease, and eighty-eight of these were benefited to such an extent that both liquid and solid food could be swallowed with comfort. Of forty additional cases, which could not be exactly classified, twenty-five were permanently relieved of pain. The injection of alcohol is infinitely more painful than the complete removal of the diseased organ and while the former simply subdues the pain for a short period, the latter does it more effectively and permanently, at least that part due to the epiglottidean involvement, and at the same time exercises a distinctly curative effect, not on this one focus alone, but on the complicating laryngeal lesions as well. Of forty-seven personal cases the stump healed perfectly in forty; in seven there was delayed healing and in only three was there recurrence. In forty-four additional cases, collected from various sources, local healing occurred in all but two.

In not one of the author's forty-seven cases was there any recognizable unfavorable effect exerted either on the lungs or the larynx, and of 213 cases reported to him in personal communications, there was not a single instance of metastasis. The claim is not made that the removal of this focus exerts a direct curative influence on the larynx as a whole, but the assertion is warranted that a distinctly favorable effect is indirectly produced.

Journal of Missouri State Medical Association, St. Louis

February, VIII, No. 8, pp. 301-336

74 Adequate Treatment of Syphilis. W. T. Wootton, Hot Springs, Ark.
75 Prognosis in Goiter. E. G. Blair, Kansas City.
76 Typhoid in Children. F. C. Neff, Kansas City.
77 Preoperative, Operative and Postoperative Treatment of Acute Intestinal Obstruction. J. Y. Brown, St. Louis.
78 Woody Phlegmon of Abdominal Wall. L. A. Todd, St. Joseph.
79 Acute Perforation of Ileum, with Operation and Recovery. W. T. Reynolds, Kansas City, Mo.
80 Joint Tuberculosis, with Special Reference to Use of Formalin-Glycerin Injection. R. Hill, St. Louis.
81 Early Care of Acute Abdominal Conditions. W. T. Coughlin, St. Louis.
82 Ascending Colon. J. M. Bell, St. Joseph.
83 Cornelius Treatment for Peripheral Nerve Diseases. E. Bentele, St. Louis.

Archives of Pediatrics, New York

February, XXIX, No. 2, pp. 81-159

84 *Use of Intestinal Antiseptics in Childhood. A. Hand, Philadelphia.
85 *Venous Hums in Children. H. R. M. Landis and I. Kaufman, Philadelphia.
86 Diphtheroid Bacilli of Penis; Report of Two Cases of Diphtheria Following Circumcision. J. A. Kolmer, Philadelphia.
87 Atypical Case of Acute Epiphysitis in Infant, with Roentgenograms. J. F. Sinclair and H. K. Pancoast, Philadelphia.
88 Comparative Caloric Value of Various Foods Used in Infancy and Early Childhood. C. B. Farr, Philadelphia.
89 Rapid and Simple Method for Calculating Caloric Value of Percentage Mixtures. F. Fraley, Philadelphia.
90 Program for Sex Instruction. I. S. Wile, New York.

84. **Intestinal Antiseptics in Childhood.**—Some of the intestinal antiseptics Hand regards as being theoretically powerful, but are too irritating to the mucosa to be used in a dose large enough to have any value. He looks on thymol, the naphthol derivatives and phenyl salicylate, or salol, as in this class. Bismuth salicylate he has found unobjectionable from this point of view, and a comparison of two series of cases, one treated solely by the starvation-plan and one treated with bismuth salicylate showed such a decided difference in favor of the drug that it seemed to have undoubted disinfectant properties. Besides the direct disinfectant action of the salicylic radical there is also obtained the sedative action of bismuth itself, which may also be enhanced by giving the subnitrate or the subcarbonate at the same time. This sedative property may also be said to have an indirect disinfectant action, such as may be attributed to decoctions of the carbohydrates, like barley water or rice water. These favor fermentation by the saccharolytic germs, which seem clinically to aid in shortening the inflammatory period so positively as to possess antagonistic action on the pathogenic germs. Hand sounds one word of warning as to the use of calomel in these cases. He uses it rarely because of its possibilities for harm. In small doses, one-twenty-fourth of a grain every three hours for four or five doses, it may be of service, but it is a much slower evacuant than oil, rhubarb or magnesia (the citrate or sulphate). And if its antiseptic action depends on its conversion into the bichlorid, then, to have any value it must be present in such amount as would seem to be irritant if not positively toxic.

85. **Venous Hums in Children.**—The authors' observations are based on a study of ninety-nine children under 15 years of age and twenty-six adults; the adult group consisting of individuals with moderate or far advanced tuberculosis. In regard to the question of the presence or absence of tuberculosis in these children, eighty-one were classed as being clinically non-tuberculous; forty-one were given the von Pirquet test; eighteen were positive; twenty were negative and three doubtful. Fourteen showed clinical evidence of tuberculosis, in seven the von Pirquet test was positive, in four it was negative and in three there was no record. Four were considered as being probably tuberculous; the von Pirquet test was positive in two, negative in one, and in one there was no record. Hemoglobin estimations were made in fourteen only, the hemoglobin ranging from 90 to 60 per cent. The estimate of the degree of the anemia formed by inspection of the skin and mucous membranes coincided fairly accurately with the hemoglobin readings.

The hum was associated with other murmurs in four instances. In one child there was a systolic murmur at the apex of the heart; in three there was a systolic murmur in the carotids, in two it was heard on the right side and in one on the left side. In two instances the murmur in the carotid artery was heard only when the child assumed the recumbent posture. The children with both venous and arterial murmurs were classed as being not anemic. So far as children are concerned the question of whether they are anemic or not seems to have very little relation to the production of the murmur, the difference between the anemic and nonanemic being very slight. Of the eighty-four children in which the hum occurred it was loudest on the right side in forty-two (50 per cent.), on the left in seventeen (20.2 per cent.), and in twenty-five (29.8 per cent.) it was heard equally well on both sides. Eustace Smith's sign was not obtained in a single instance of some thirty cases in which it was looked

In regard to the question of altering the position on the production of the murmur, it was noted that in those with anemia the murmur was heard with the head held straight in thirteen instances and in twenty-six everting the head brought the murmur out. In the non-anemic children the murmur occurred in thirteen instances with the head held straight, while in thirty-two turning the head produced a murmur. Changing the position of the child from an upright to a recumbent posture caused the murmur to disappear in sixty-eight (81 per cent.) instances, and in sixteen (19 per cent.) the murmur persisted, but usually much diminished in intensity. It is to be noted that the presence of anemia seemed to have some influence in the persistence of the murmur when the recumbent posture was assumed, thus the murmur disappeared in 93.3 per cent. (forty-two out of forty-five) of the nonanemic children, while in the anemic it disappeared in only 66.7 per cent. (twenty-six out of thirty-nine). In a few instances, when the murmur occurred on both sides, the recumbent posture would cause a disappearance of the murmur on one side only. The authors were unable

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to establish any relationship between tuberculosis and the murmur; as a matter of fact 85.7 per cent. of the murmurs occurred in children classed as nontuberculous. In the twenty-six cases over 16 years of age a venous hum was noted in three when the head was turned. These three cases were moderately advanced cases of tuberculosis, two being noted as anemic and one not so.

Bulletin of American Academy of Medicine, Easton, Pa.

February, XIII, No. 1, pp. 1-54

91 Should We Expect More Than Mediocrity from Medical Profession? F. M. Pottenger, Monrovia, Cal.
92 Dr. Leartus Connor. J. E. Emerson, Detroit.
93 *Report of Committee to Investigate Teaching of Hygiene in Public Schools. H. C. Putnam, Providence, R. I.
94 *Report of Committee for Teaching Preventive Medicine in Universities and Normal Schools. H. B. Hemenway, Evanston, Ill.
95 Report of Seventh Annual Conference of Council on Medical Education of American Medical Association. J. L. Heffron, Syracuse, N. Y.
96 Report of Delegate to Meeting of Association of American Medical Colleges. F. H. Gerrish, Portland, Me.

93 and 94. Abstracted in THE JOURNAL, July 22, 1911, pp. 312 and 313.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

February, XV, No. 2, pp. 65-128

97 *Some European Spas; Peep Behind the Scenes. H. Stern, New York.
98 *Constipation with Diarrhea. A. Bernheim, Philadelphia.
99 Treatment of Parasyphilitic Conditions with Salvarsan. E. D. Holland, Hot Springs, Ark.
100 Hay Asthma; Its Symptoms, Treatment and Etiology. L. Kolipinski, Washington, D. C.
101 Treatment of Chronic Disease. J. M. Taylor, Philadelphia.

97. **European Spas.**—Stern derides European spas as being purely commercial propositions. He says that many go to Nauheim who never return alive. They are buried or shipped to the railroad station in the dark of the night. Day funerals are prohibited; they cast a gloom over the remaining cure guests and one involuntary deserter of the ranks may undoubtedly make many a voluntary one. Health resorts, he says, may serve a good purpose. They remove the patient from his usual surroundings to a salubrious environment; they form an oasis in this life of drudgery and suffering. Their mineral springs, even, may be of some use to some patients, but they are not essential. In fact, many a patient recovers at a spa in spite of its waters. Fake promises and fake practices must be suppressed as we suppress fake medicines. The fake sanatorium with its eccentric dietary and pseudoreligious atmosphere has no place whatsoever in the honest practice of medicine. It is these and the railroad companies, exploiting every spring of tepid water along its lines as a cure-all, that are preventing a natural development of spas like our own Saratoga.

98. **Constipation With Diarrhea.**—In many of the cases of diarrhea which came under Bernheim's observation, he found all the usual symptoms of habitual constipation, symptoms partly such as those attributed to autointoxication and vasomotor ataxia, viz., headaches, dizziness, drowsiness; indefinite pains more or less all over the body; loss of ambition; frequently chronic catarrhal conditions of the nose and pharynx; tachycardia; in other cases heavy and slow pulse; in some cases frequent micturition. In a number of young girls and women there existed pronounced symptoms of chlorosis; these were not relieved in spite of the administration of iron, the diarrhea continuing. The diarrhea manifested itself in various ways: Sometimes there was one evacuation, sometimes as many as ten or twelve, during the twenty-four hours; evacuations occurred but seldom during sleep. Usually the volume of each stool was small; the consistency of the feces varied from watery to a soft, mushy and curd-like state. The treatment of these cases is the treatment of constipation.

New Mexico Medical Journal, Las Cruces

February, VII, No. 5, pp. 143-186

102 Epidemic Meningitis. B. F. Stevens, El Paso, Tex.
103 How to Choose a Doctor. S. D. Swope, Deming.
104 Surgery from Standpoint of Patient. W. W. Roblee, Riverside, Cal.
105 Foreign Bodies in Eye. J. B. Gray, El Paso, Tex.
106 Importation of Uncinariasis. J. W. Colbert, Albuquerque.

Boston Medical and Surgical Journal

March 7, CLXVI, No. 10, pp. 359-398

107 John Hunter. F. L. Burnett, Boston.
108 *Value of Intra-Uterine Douches, Packing and Antiseptics in Treatment of Miscarriage; Study of 2,000 Cases. E. B. Young and J. T. Williams, Boston.
109 Methods of Favoring Proteid Digestion. R. B. Hunt, Boston.
110 Amaurotic Family Idiocy. R. M. Smith, Boston.
111 Card for Rapid Calculation of Milk Modifications. J. H. Young, Newton, Mass.
112 European and American Orthopedic Apparatus. W. H. Kraus, Boston.
113 Sarcoma of Tonsil. G. Berry, Worcester, Mass.

108. **Treatment of Miscarriage.**—The number of cases studied by Young and Williams does not total quite 2,000, as those admitted with advanced sepsis and those in which no operative procedure was undertaken have been excluded, in order that conditions in all instances might be as nearly identical as possible. Obviously neither cases with advanced sepsis nor those in whom operative treatment was unnecessary have any bearing on the subject under consideration. Among the cultures taken from the uterine cavity in ninety-seven infected cases of miscarriage, twenty-eight different organisms or combinations of organisms were recovered. The largest number showed the streptococcus, which was present as a pure culture in only twenty-two instances, but it is interesting to note that, in these few cases, the findings were essentially the same as in the entire series. There were distinctly more instances of salpingitis following intrauterine douches, especially among the infected cases, where organisms were present in increased numbers. No great advantage is obtained by irrigation over simple wiping of the cavity in clean cases; while in the infected, the percentage of morbidity is nearly twice as great after irrigation as after wiping with sterile gauze. Plain sterile salt solution gave better results than any of the antiseptic solutions tried.

In the clean cases, the morbidity after the corrosive intrauterine irrigations is nearly twice that of either alcohol or salt solution, while even the small difference between the results after alcohol and salt solution should lead us to select the latter. The outcome in the infected cases shows that salt solution is again by all means to be preferred for an intrauterine douche, since the morbidity is much less after its use.

Iodin has been used in two forms, iodoform (10 per cent.) and tincture of iodin. These have been applied by swabbing the uterine cavity with gauze saturated with the preparation. In many instances the uterus has also been packed with iodoform gauze for twenty-four hours. Where the tincture has been used, a strip of sterile gauze saturated with the solution has been left in the cavity from one to three hours in some cases. The actual value of this has not been determined. One case among thirty-eight in which an iodin strip was left in the uterus, and one case in twenty-eight which were simply swabbed out with iodin and the cavity left empty, had a morbid convalescence. Tincture of iodin has given the best results of any antiseptic used in the uterus.

Antiseptic packing has been employed as a prophylactic in "clean" and as a therapeutic measure in infected cases. In the apparently clean cases the use of gauze treated with an antiseptic seems superior to the plain sterile gauze, although in infected cases exactly the reverse is true. Iodin saturated gauze, being irritating, has not been used to pack the uterus for hemorrhage, nor when used for its antiseptic effect has it been allowed to remain in the uterus more than three hours.

Of those antiseptics which have been used to saturate gauze packing at the Boston City Hospital, alcohol has given the best results, but in infected cases plain sterile gauze is superior to any antiseptic gauze which has been employed.

Wisconsin Medical Journal, Milwaukee

February, X, No. 9, pp. 491-554

114 Arteriosclerosis in Young. D. Hopkinson, Milwaukee.
115 Impaling Injuries of Pelvis. C. J. Habbegger, Watertown.

Journal of South Carolina Medical Association, Seneca

February, VIII, No. 2, pp. 31-59

116 Infantile Scorbutus. W. Weston, Columbia, S. C.
117 Plea for Early Diagnosis and Treatment in Acute Appendicitis. S. E. Harmon, Columbia, S. C.
118 Surgical Anesthesia and Shock. S. C. Baker, Sumter, S. C.
119 Manifestations of Chronic Appendicitis. R. S. Cathcart, Charleston, S. C.

New York Medical Journal

March 2, XCV, No. 9, pp. 417-468

120 Functional Disorders and Neuroses of Stomach. J. Kaufmann, New York.
121 Diagnosis of Intra-Abdominal Conditions Presenting Acute Manifestations. N. Jacobson, Syracuse, N. Y.
122 Relation of Specialist to General Practitioner. W. S. Gotthelt, New York.
123 *Sodium Cacodylate in Syphilis. L. J. Spivak, Philadelphia.
124 Seventeenth Century Surgeon and His Fee. W. R. Riddell, Toronto, Ont.
125 Vaccine Therapy of Colds. G. H. Sherman, Detroit.
126 Postoperative Gastric Dilatation. T. C. Witherspoon, Butte.
127 Chronic Excessive Intestinal Putrefaction as Factor in Production of Disturbances of Nasal Mucous Membrane. S. Ploeraheim, New York.
128 Sarcoma of Testicle, with Report of Case. A. C. Stokes, Omaha.
129 *Iodin Fumigation. C. J. Koenig, Paris, France.

March 9, XCV, No. 10, pp. 469-520

130 *Bone Transplantation and Osteoplasty in Treatment of Pott's Disease of Spine. F. H. Albee, New York.
131 Moderately Contracted Pelvis and Induction of Labor. E. McDonald, New York.
132 Neglected Cold. J. B. Huber, New York.
133 Moral Problems of College Life. S. Egbert, Philadelphia.
134 What a Father Should Tell His Son. I. S. Wile, New York.
135 What a Mother Should Tell Her Child. M. S. Macy, New York.
136 *Bacteria of Conjunctiva. K. M. Lynch, Philadelphia.
137 Trace of Urinary Albumin. D. G. R. Williams, Paris, Ill.
138 Strangulation of Intestine Beneath Persistent Inguinal Genital Ligament. C. H. Wallace, St. Joseph, Mo.

123. **Sodium Cacodylate in Syphilis.**—Arsenic in the form of sodium cacodylate has been found useful in syphilis by Spival. He says that while its action is not as rapid as that of salvarsan, it accomplishes results not unlike those of salvarsan. It is very reasonable that it should, because the arsenic content of "606" is 34 per cent. while the arsenic content of sodium cacodylate is 48 per cent. Being sure that the salt is pure, and making a solution of it fresh every day, it is nonpoisonous to the human system, even in doses as high as five or six grains injected daily for three weeks, even for a month; in other words, the human system can take in 100 grains of sodium cacodylate in three weeks with no signs of arsenical poisoning. There is no albuminuria, no sign of ocular disturbance; the only untoward effects ever noticed were slight shooting pains in the muscles, particularly those of the shoulder, and sometimes this reached to a muscular spasm. There is no reaction at the site of injection.

The drug should be used for effect, beginning with three grains daily and increasing as results are noted. The drug is cumulative in action, as improvement continues for a week or so after the injections cease. The best results are seen in early syphilis. It has a marvelous effect on the initial lesion and on the maculoroseolar eruptions. The action on the papular syphiloderm is somewhat slower, but in large doses is effective. The drug has practically no effect on the adenopathies. Enlarged cervical, epitrochlear and inguinal glands persist in spite of massive doses. Mucous patches and condylomata clear up readily without any other treatment. The drug has a splendid alterative effect and can be used for that alone in the course of syphilitic treatment. All patients, whether their lesions were benefited or not, speak of a sense of well being, of added strength, of a better appetite and even of an increase in weight. On the rupia and tertiary lesions, sodium cacodylate has practically no effect.

Immediately after the patient has had his course of injections, he should be placed on mercury, otherwise the external manifestations recur. It would even be well to alternate a course of mercurial treatment with a course of cacodylate injections. The two drugs seem to be synergistic; one has a stronger effect in the presence of the other. The effect of the drug on the Wassermann reaction is practically *nil*. Spival holds that the drug should prove to be a useful adjunct in the treatment of syphilis, especially where salvarsan cannot be used, either for financial reasons or through some physical condition of the patient. Sodium cacodylate is cheap, easily prepared, and very easy to administer.

129. **Iodin Fumigation.**—Koenig calls attention to the method he has used for six or seven years in the treatment of divers affections of the middle ear (chronic suppurative otitis, sclerous otitis, etc.), and which gives an iodin fumigation in a very simple manner by using pure iodin, the vapors being obtained and carried along by a current of warm air, which adds its effect to the therapeutic action of the iodin.

To that effect he employs: (1) A small metallic capsule made of two hemispheres, which can be screwed together and which are surmounted each by a tip, one conical for introduction into the funnel-shaped end of the Eustachian catheter, the other cylindrical for adaptation to the tube of a hot air generator; (2) the hot air generator of Lermoyez and Mahn; (3) the following preparation:

℞	Gm. or c.c.		
Menthol	1.0		gr.xv
Powdered camphor } Iodin in crystals }	aa 2.0	or	aa gr.xxx
Powdered talc	30.0		ʒj

This mixture, finely pulverized, gives a dry powder, resembling powdered cacao. If less talcum powder is incorporated, a moist mass is obtained which cannot be used. A small quantity of this powder is placed between two layers of absorbent cotton, with which Koenig lines the interior of the hemispheres of the capsule. By allowing a current of warm air to pass through the latter thus prepared, after a short time varying with the temperature and the force of the current, there remains between the two layers of cotton the white talcum powder alone. In this capsule one may also employ in the manner described all sorts of volatile substances, including iodoform powder. But to obtain a decomposition of the latter, a temperature of at least 90 C. (194 F.) is required with the formation of nascent iodin vapors and also of hydriodic acid. In chronic suppuration and in certain forms of sclerosis of the middle ear, the results are quite appreciable. This method can naturally be applied in many other affections of the nose, throat, and ear, as well as in other conditions (cutaneous and uterine diseases), and in general medicine and surgery.

130. **Osteoplasty in Pott's Disease.**—Twenty patients have been operated on by Albee. In four of the cases, three or four spinous processes were split with a chisel or bone forceps for one to one and one-third inch from their tips, into halves, either through a plane approximately parallel with the long axis of the trunk or at right angles to it. The tip of the lower half of the superior vertebra was then brought into approximation with the tip of the superior half of the next lower vertebra, after green stick fractures of each, and fastened with heavy kangaroo tendon. Chips of bone from the spinous processes were then placed between so as to insure further bony union between these vertebræ. Union has been satisfactory so far as can be ascertained, but on account of its uncertainty, due to constant respiratory motion in the dorsal region, and the large amount of cartilage in the vertebræ of small children, with its slowness of union and early lack of support, and the extreme atrophy and rarefaction of the spinous processes of tuberculous vertebræ, it has seemed best to Albee to devise a procedure which would be, possibly, more reliable and also give support from the beginning. Therefore, in the last sixteen cases bone grafting has been resorted to with the most gratifying results. The crest of the tibia was selected as being by far the most desirable and accessible from which to obtain the graft.

136. **Bacteria of Conjunctiva.**—A summary of Lynch's study shows 57.6 per cent. of normal conjunctivæ to harbor the xerosis bacillus, 20 per cent. the pneumococcus, 3.8 per cent. the diplobacillus of Morax-Axenfeld, 3.8 per cent. staphylococci, 9.2 per cent. Friedländer's bacillus, 3 per cent. yeast fungi, a few contained unrecognized bacteria, while in only 40 per cent. could no bacteria be found. In the acute cases it was demonstrated that practically always the conjunctival sac contained the xerosis bacillus immediately after a gonococcic infection, while the pneumococcus, pneumobacillus and staphylococcus were each present in a few in pure culture. In the chronic cases the xerosis bacillus was demonstrated in nearly 100 per cent., while mixed with it in a few cases were the diplobacillus of Morax-Axenfeld, the pneumobacillus, and staphylococci.

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Chicago Medical Recorder

February, XXXIV, No. 2, pp. 55-114

139 The Child that Is to Be. C. B. Reed, Chicago.
140 Importance of Early Diagnosis of Pathologic Conditions of Adenoids and Tonsils, and Treatment. C. J. Whalen, Chicago.
141 Treatment of Tuberculous Joint Disease with Carl Spengler's "I. K." Serum; Report of Six Cases. J. L. Porter and C. Quinn, Chicago.
142 Allies of Health Department. G. B. Young, Chicago.
143 Care of Sick Poor in Japan. W. W. Peter.

Medical Record, New York

March 9, LXXXI, No. 10, pp. 451-500

144 Occupational Neuroses. C. L. Dana, New York.
145 Hysteria and Psychotherapy. E. D. Bondurant, Mobile, Ala.
146 Experiences with Duodenal Alimentation. M. Einhorn, New York.
147 Some Experiments on Serous Sac Distention. A. A. Smith, New York.
148 Plight of Consumptive Wage Earner. J. F. Russell, New York.
149 Action of Lactic Acid Bacilli on Percentage of Glucose in Urine in Diabetics. P. Horowitz, New York.
150 Environment in Treatment of Nervous Disorders. H. Crenshaw, Atlanta, Ga.
151 Cases of Imperforate Anus and Malformed Rectum. C. P. Farnsworth, Chamberlain, S. Dak.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

February 24, I, No. 2669, pp. 469-468

1 *Immunity Problem and Organic Evolution. C. J. Bond.
2 *Analysis of Five Hundred Consecutive Operations for Acute Appendicitis. A. H. Burgess.
3 Inguinal Operation for Radical Cure of Femoral Hernia. C. A. Morton.
4 Case of Adder Bite. E. F. Clowes.
5 Case of Ruptured Spleen; Splenectomy; Recovery. H. J. Clarke.
6 Anesthesia for Submucous Resection of Septum. B. S. Jones.
7 Atropin and Open Ether Administration. H. B. Gardner.
8 *Left-Sided Subphrenic Abscess Due to Perforated Duodenal Ulcer. H. D. Rolleston.
9 *Transmission of Leprosy to Animals by Direct Inoculation. H. Bayon.
10 *Intestinal Obstruction from Unusual Cause. J. T. Thomas.

1. **Immunity Problem and Organic Evolution.**—Bond maintains that if we may regard the great immunity reaction as a type of evolution and adaptation in other fields, if we may regard natural immunity through natural selection as a type of the earlier methods, and artificial immunity through the exercise of individual capacity to profit by experience and through environmental control as a type of the methods of the future, then, bearing in mind the success that has been achieved by these latter methods in the struggle against disease, we may look confidently to an extension of use acquirement and environmental control in other fields, rather than to a return to innate preadaptation and natural selection, remembering always that both methods depend on innate capacity of some kind or other, capacity of being already adapted before experience, on the one hand, or capacity to become adapted and to learn by experience on the other. Since innate capacity of recovery in the immunity reaction, like capacity to learn or educability in all adaptive responses are matters of heredity and breeding, it is essential in discarding the older method of natural selection that we take steps to safeguard the transmission and production of innate capacity by some measures of eugenic control.

2. **Operations for Acute Appendicitis.**—Burgess' series comprised 285 males and 215 females. He believes, however, that many slight attacks pass unrecognized in the female, in whom, owing to the menstrual function, slight abdominal pain is not held of so much account as in the male, where all abdominal pain is abnormal. Moreover, many attacks of appendicitis coincide in their onset with that of menstruation, and are, therefore, all the more likely to be overlooked. The average age was 26.3 years. The oldest patient was 77, the youngest 3. One hundred and forty-two patients gave a history of one or more definite previous attacks, that is, 28.4 per cent. The most instructive feature of this analysis is the progressive increase of mortality with each successive day of the disease up to the sixth day. Of the five deaths occurring in those patients operated on within forty-eight hours the two on the first day and one of those on the second were due to the interesting but very fatal condition known as "delayed chloroform poisoning" or "fatty acid intoxication." One other patient in this series died from the same cause, and as in all four chloroform was the anesthetic administered, Burgess believes it better to avoid this agent in these acute abdominal infections, especially in children. Though it is not impossible for the condition to follow on the administration of ether, yet the recorded cases show this to be much less probable, and he believes that with "open ether" as the routine anesthetic the mortality in these "early" operations can be materially reduced. The two remaining deaths in these patients operated on within forty-eight hours were, one from continued spread of the infection leading to general peritonitis, and one from acute pneumonia, developed on the eighth day, after complete subsidence of the abdominal symptoms.

Of the thirty-five deaths among the patients operated on after forty-eight hours the causes were: Shock, collapse or toxemia twenty-six, acute pneumonia four, pulmonary embolism one, sudden heart failure one, acute nephritis with uremia one, and intestinal obstruction two. It is interesting to note that of 213 cases of circumscribed abscess with a total mortality of 4.64 per cent., the appendix was removed in addition to opening the abscess in 107, with a mortality of 1.86 per cent., whereas in 106 cases in which it was left the mortality was 7.54 per cent.

Fruit seeds were found in the appendix in a few instances, and in several, small thread worms were present. Fecal concretions occurred in 21 per cent. of the cases. Their presence is interesting in relation to the site of perforation or gangrene. Perforation of an appendix which does not contain a concretion usually occurs near to the tip and on the free border, just distal to the termination of the attachment of the appendix-mesentery. Perforation of one containing a concretion is more probable opposite the concretion. The practical application of this is that if a perforation be found elsewhere than near the tip of an appendix in which no concretion can be felt careful search should be made for one which may have escaped through the perforation, and which, if overlooked, may lead to a persistent sinus.

8. **Subphrenic Abscess.**—In this case the signs pointed to a right-sided gaseous subphrenic abscess, whereas the abscess was really on the left side. In explanation of this want of accord between the physical signs and the real condition, Rolleston says it is highly probable that there was free gas on the right side of the falciform ligament, though the abscess was on the left side. For at the operation air but no pus came out when the peritoneum was opened by the incision to the right of the right rectus muscle. The main interest of the case is the occurrence of a left-sided subphrenic abscess due to a perforated duodenal ulcer. In this instance the history of past attacks of a similar, though less severe, nature and the presence of adhesions make it highly probable that there had been attacks of local peritonitis in connection with the duodenal ulcer, and that the adhesions thus produced were responsible for the abscess being on the left side of the abdomen.

9. **Transmission of Leprosy to Animals.**—It is claimed by Bayon that leprosy can under certain circumstances be transmitted to animals, the main difficulties being the high percentage of failures and the long incubation. The most suitable animals appear to be the rabbit, rat or mouse. In the rabbit the intra-ocular method is preferable. The resulting lesions are often not visible to the naked eye, and are similar to those caused by certain strains of human tubercle. In the rat the incubation is also very long, the resulting lesions comparable to those occurring in spontaneous leprosy of the rat. Not all leprous patients are equally "infective" for animals. In some cases the lepra "bacilli" appear to be absolutely incapable of multiplication, for reasons not known at present. According to Stanziale's experiments, the "Wassermann reaction" is positive in rabbits which have been inoculated successfully.

10. **Intestinal Obstruction.**—On opening the abdomen and introducing his hand into the abdominal cavity Telfer felt a hard mass like a stone in the pelvis. This mass was found to

be blocking the ileum about 6 inches from the ileocecal junction. Telfer removed the lump through a longitudinal incision in the ileum, and on examination found it to consist of small bits of gutta-percha matted together. The patient was employed in a safety-fuse factory, and her duty was to supervise the coating of the fuse with melted gutta-percha from a container; this is done by means of a large spatula. Some of the gutta-percha naturally adheres to the spatula, and the girl had been in the habit of cleaning the spatula with her fingers, and then removing the gutta-percha adhering to her fingers with the teeth, and chewing and swallowing it.

Lancet, London

February 24, 1, No. 8, pp. 483-556

11 Glycosuria. A. E. Garrod.
12 *Principles of Treatment in Exophthalmic Goiter. G. R. Murray.
13 Cystitis: Its Causes and Treatment. D. Newman.
14 *Intestinal Flora. A. Distaso.
15 The Ileocecal Valve. O. Kraus.
16 *Pyemia Treated with Specific Antistreptococcus Serum. C. W. G. Bryan.
17 Case of Pernicious Malarial Fever Simulating Uremia. B. N. Varma.
18 Unusual Case of Inguinal Hernia. H. M. Anderson.
19 Examination of Medical Provisions of National Insurance Act. W. A. Brend.

12. Treatment of Exophthalmic Goiter.—Murray advocates operation in all cases in which there is distinct stridor from compression of the trachea or persistent pain in the goiter. In cases of a mild type he does not consider an operation necessary. In very severe cases with marked cardiac failure the risk is too great. In a certain number of cases of moderate severity, in which no adequate improvement has resulted from medical treatment fully tried for 12 months, a partial thyroidectomy or ligation of the superior thyroid arteries may be advised.

14. Intestinal Flora.—Constipation and the resulting intoxication Distaso believes are caused by the intestinal flora; and that the large intestine is the seat of this process. Doubtless the products of the intestinal bacteria, by increasing secretions inhibiting the submucous plexuses, give rise to stasis. The accumulation of feces in the colon causes the viscera to fall downward, dragging on the organs which are attached to it. The ileum especially is affected, so that it may be almost occluded, or the ileocecal valve may become inflamed, and thus the passage of feces be further impeded.

16. Treatment of Pyemia.—In Bryan's case the pyemia occurred as a complication of the Lorenz operation for congenital dislocation of the hip.

Clinical Journal, London

February 7, XXXIX, No. 18, pp. 273-288

20 Treatment of Advanced Uterine Carcinoma and Ligation of the Internal Iliac Arteries. C. Ryall.
21 Roentgen-Ray Diagnosis of Pulmonary Tuberculosis. G. H. Orton.

February 14, XXXIX, No. 19, pp. 289-304

22 Primary Pneumonia in Childhood. R. Hutchison.
23 Need of Preparation for Anesthesia. J. D. Mortimer.

February 21, XXXIX, No. 20, pp. 305-320

24 Acute Arthritis. W. H. White.
25 Clinical Surgery an Art and a Science. C. B. Lockwood.

Medical Press and Circular, London

February 21, XCIII, No. 3798, pp. 183-210

26 *Treatment of Acute Edema of Lung. A. Robin.
27 Antityphoid Inoculation. W. B. Leishman.
28 Dental Hygiene of Childhood. G. Thomson.
29 Epidemic of Methylic Alcohol Poisoning at Berlin. M. Stadelmann.
30 Intrinsic Cancer of Larynx: Operation by Laryngo-Fissure. S. Thomson.

26. Treatment of Acute Edema of Lung.—To bring about acute pulmonary edema there must be a renal factor, a cardio-arterial factor and a broncho-pulmonary factor with an accidental cause to set the process going. Immediate energetic treatment comprising free blood-letting will in eight out of ten cases effect a cure. The patient must be put on the lacto-vegetarian diet, the action of the heart being improved by the administration of digitalin in cardiotonic doses. The next thing is to try and reduce arterial tension, with which object in view Robin prescribes as follows:

R	Gm. or c.c.		
Sodii nitritis	1		gr.xv
Sodii lactatis	4		3i
Sodii silicatis	2	or	3ss
Potassii bicarbonatis	8		3ii
Aquæ dest.	120		3iv

Ft. solutio. S. Three or four tablespoonfuls every hour for four hours.

The etiologic factors in the production of acute pulmonary edema are seven in number: (1) Renal disease, especially of the interstitial kind; (2) aortic affections and arterial cardiopathies; (3) pleuropulmonary affections such as pleurisy and pneumonia; (4) thoracentesis, when the effusion is too rapidly withdrawn; (5) certain infective states, eruptive fevers, acute articular rheumatism, influenza, typhoid, erysipelas; (6) certain affections of the nervous system; (7) intoxications and dyscrasia, such as acute alcoholism, but only when the kidney is damaged; the injection of saline solutions, owing to sudden increase of arterial tension, inhalations of nitrite of amyl, and the use of iodid of potassium and, lastly, gout. In most instances acute pulmonary edema is the consequence of Bright's disease; consequently the treatment, that is to say the prophylactic treatment, is that of chronic nephritis.

Journal of Tropical Medicine and Hygiene, London

February 15, XV, No. 4, pp. 49-64

31 Some Effects of Climate on Health of Imported Tea-Garden Labor in Assam. C. Roper.
32 Scientific Investigation of Malaria. M. D. O'Connell.
33 Antimalarial and Antiyellow Fever Work in Calabar, Southern Nigeria. W. Best.

Bulletins de la Société de Pédiatrie, Paris

January, XIV, No. 1, pp. 1-32

34 Symmetrical Gangrene in Boy of 3. (Cas très grave de maladie de Raynaud chez un enfant de trois ans.) G. Variot and Morance.
35 Inherited Syphilis of the Nervous System. (Quelques faits d'hérédosyphilis du système nerveux.) H. Barbier and Gassier.
36 Foreign Bodies in Esophagus: Two Cases. (Corps étranger dans l'oesophage.) H. Abrand.
37 Experimental Rachitis. A. B. Marfan and Feuillie.
38 Simulated Ileus and Pneumococcus Septicemia. (Pseudo-occlusion intestinale et septicémie à pneumocoque.) H. Triboulet and S. I. De Jong.
39 Intoxication from Milk and Tolerance for Desiccated Milk. (Intoxication par le lait liquide et tolérance pour le lait sec.) M. Nageotte-Wilbouchevitch.

Grèce Médicale, Syra, Greece

February 15, XIV, No. 4, pp. 1-4

40 *Healthy Cholera Bacillus Carriers. (Questions d'hygiène et de prophylaxie internationale.) A. Panayotatou. Commenced in No. 1.

40. Healthy Cholera Bacillus Carriers.—Panayotatou is an official of the international public health office at Alexandria, Egypt, and he reviews the experiences to date with healthy cholera germ carriers as recorded in the literature and then gives the details of the similar occurrences at Alexandria in the last few months.

Seventeen healthy bacillus carriers were found on five ships arriving in the harbor from other Mediterranean ports; three of the ships had no cases of cholera on board. The bacillus carriers and those presenting the disease were always among the poorest and most crowded passengers, confirming the assumption that cholera is a disease affecting almost exclusively the lowest strata of society. The bacillus carriers on the infected ships had always been in more or less direct contact with the sick. The disease broke out in several of the cases later than the incubation period of five days, which is accepted as the limit by the international convention. One two months' babe had in its stools vibrios agglutinating at 1 to 20,000, while it seemed perfectly well all the time; its mother who tended it exclusively was free from cholera bacilli. It was noted that the healthy carriers lost their bacilli in one or two days when the carriers were from ships free from cases of cholera, while the carriers who had been in direct contact with the sick kept the bacilli for from six to thirteen days. The conclusion seems evident from these experiences that the only means for successful prophylaxis is by bacteriologic examination of the stools of all on board ships from infected ports, or at least of all the steerage passengers. This will permit the immediate release of all whose stools are free from germs, while the carriers should be isolated until the vibrios have disappeared from their stools.

Presse Médicale, Paris

February 10, XX, No. 12, pp. 121-132

41 Toxic Action of Hectine on the Ear. (Pronostic des troubles auriculaires provoqués par l'hectine.) Gaucher and Guggenheim.
42 Diuresis in Course of Typhoid Fever. M. Labbé and Bith.
43 *Gout of the Salivary Glands. (La goutte des glandes salivaires.) E. Deglos.

February 14, No. 13, pp. 133-140

44 Subacute Anterior Spinal Paralysis. (Paralysie infantile à type Duchenne-Erb.) A. D'Espine.
45 *Headache from Chronic Cervical Myositis. (Les céphalées musculaires.) P. Hartenberg.
46 Staining Technic for Malaria Parasites. (Importance des colorations extemporanées quasi-vitales pour le diagnostic du paludisme et l'étude des diverses modalités d'hematies parasitées.) J. Sabrazès.

43. Gout of the Salivary Glands.—Deglos remarks that the salivary glands are sometimes affected in the course of acute articular rheumatism, and in this case the parotitis is promptly cured with sodium salicylate. He recently was called to a woman of 64, suffering from what seemed to be bilateral mumps. The salivary glands had swollen suddenly, the temperature was only a trifle above normal and the pulse 86. She had had attacks of gout at intervals for fifteen years, and Deglos assumed that the glandular trouble was of this nature and ordered a milk diet, copious drinking, colchicum in large doses and moist heat locally. By the next day the trouble had almost entirely disappeared, confirming his diagnosis.

45. Headache of Muscular Origin.—The muscles affected are those in the neck, Hartenberg having repeatedly found in cases of recurring or chronic headache that some of the muscles in the neck were tender, with elastic local swellings or the swellings had hardened to little nodules in the depths of the muscle. Besides the myositis, the lymph-nodes may be large and hard and there may be infiltration and thickening of the skin. The condition may entail migraine, and he has been able to cure in many cases of migraine by treatment addressed to the muscles, especially massage and galvanization. This condition of the muscles is not limited to the neck, but extends throughout the body as a rule, and is the explanation for many cases of assumed neuralgia, sciatica, abdominal algias, etc., the nerves being compressed and irritated by the interstitial nodule formation. Asthma, angina pectoris, gastralgia, pseudo-appendicitis may also be traceable to this cause in some cases. The primary cause is probably defective circulation of blood or lymph from lack of muscular exercise. Local cold and cold in general favor it, as also sedentary occupations. Hartenberg calls it "the rust of the tissues from lack of physical activity" and says that this sclerous cellulitis is a sign of premature senility, and that massage, which smoothes out the infiltrations and nodules, makes one young again.

Revue de Chirurgie, Paris

February, XXXII, No. 2, pp. 153-368

47 *Inflammatory Tuberculosis and Epithelial Cancer. (Tuberculose inflammatoire et cancers épithéliaux.) A. Poncet and R. Leriche.
48 *Tansini's Technic for Amputation of the Mamma. (La technique de l'amputation de la mamelle pour carcinoma mammaire par le procédé de Tansini et sur une nouvelle application de cette operation.) S. d'Este.
49 *Ligation of Common Iliac Artery and Neighboring Vessels. (Région termino-aortique et ligature de l'artère iliaque primitive et des autres vaisseaux de la région.) A. Chalier and J. Murard.

47. Inflammatory Tuberculosis and Epithelial Cancer.—Poncet and Leriche do not mean to say that inflammation from tuberculosis is the exclusive predisposing factor, but they maintain that it certainly has something to do with the development of many tumors as well as of many skin affections, etc. For cancer especially, preceding irritation of the tissues seems an indispensable factor, and this may be of traumatic, chemical or infectious origin. It is their impression that tuberculosis plays a very important part here. They are not able to present proof to substantiate this impression, but urge definite research in this line.

48. The Tansini Method of Mammectomy.—D'Este gives a number of illustrations to show the remarkably fine outcome of Tansini's method of amputating the mamma with the glands up into the axilla. The incision encircling the mamma is egg-shaped except that the small end of the ovoid tapers to a point in the center of the axilla. A corresponding ovoid incision is then made on the back, slanting outward from the axilla. The incision curves up on the rear, leaving a broad base to the flap, on a level with and extending back of the axilla. After the breast has been removed, the ovoid flap from the back is slipped around to fill the defect. The mobilization of the flap is facilitated by a short incision sloping backward from the tip of the shoulder. The long narrow triangle of skin pointing upward that has been left between the ovoid incisions front and rear is drawn back and sutured to the skin of the back. The whole fits in perfectly, and some of the twenty illustrations show how a patient is able to raise her arm over her head without difficulty after sixteen days. There is no retraction of tissues or cicatricial growth—merely a linear N-shaped scar.

49. Ligation of Common Iliac Artery.—Chalier and Murad have been studying the anatomy of the lower end of the aorta, especially the reciprocal relations between the arteries and veins. They discuss the feasibility and technic for ligating vessels in this region.

Semaine Médicale, Paris

February 21, XXXII, No. 8, pp. 85-96

50 *Mumps Pancreatitis. (La pancréatite ourlienne.) L. Cheinisse.

50. Pancreatitis During Mumps.—Cheinisse presents evidence to prove that pancreatitis may be one or the sole manifestation of the acute infection called epidemic parotitis. The pain and protrusion of the stomach region which some writers have explained as acute mumps pancreatitis, may have been merely an acute gastritis as a manifestation of the infectious process. Cheinisse has encountered an unmistakable case of the kind, the pain in the stomach and incessant vomiting sustaining this assumption. In Pick's four cases, however, it was the pancreas region, not the stomach, which was tender, and there was no tendency to vomiting. In some of the cases the pancreatitis was accompanied by extreme slowness of the pulse, 44 being the pulse rate in Edgecombe's case. The pancreatitis, like the orchitis, may precede the parotitis; there was an interval of two days before the parotitis became evident in Sharp's case in a girl of 5. Cuche warns that the fever and pancreatitis may be the only manifestations of the disease, and reports an instructive example of this abortive form. A girl of 13 had typical mumps; ten days later her brother of 11 was taken with intense pain in the right hypochondrium and epigastrium, but there was no vomiting. The stools contained traces of blood and droplets of fat, the urine gave a positive reaction to Fehling's test, and the pancreas could be palpated enlarged. The child soon recovered and there was no trace of parotitis at any time. Although the prognosis seems to be favorable with mumps pancreatitis, yet the two cases reported by Harris in which diabetes mellitus quickly followed on mumps, suggests the wisdom of keeping an oversight over patients who have had pancreatitis during epidemic parotitis.

Beiträge zur klinischen Chirurgie, Tübingen

January, LXXVII, No. 1, pp. 1-333

51 *Operations on Anterior Mediastinum. (Die Eröffnung des vorderen Mittelfellraumes.) F. Sauerbruch.
52 *Reenforcing Hernlotomy Wounds with Periosteum. (Die Sicherung grosser und übergrosser Bruchpforten durch Ein oder Aufnähen freier Periostlappen.) K. Henschen.
53 *Operative Displacement of Goiter. (Indikationen und Technik der operativen Kropfverlagerung.) K. Henschen.
54 *Cancer of the Pharynx. (Bericht über 136 Pharynxcarcinomfälle.) Schumacher.
55 Transpleural Laparotomy. (Beiträge zur transpleuralen Laparotomie.) Schumacher.
56 Enucleation of Encapsulated Abscess in the Brain. (Ueber einen Fall von abgekapseltem Hirnabscess und dessen Enukleation.) A. Billeter.
57 *Accessory Thyroid Tumor at Base of Tongue. (Zur Pathologie und Therapie der Zungenstruma.) H. E. Walther.
58 *Fever-Producing Influence of Salt Solution. (Zur Genese der Hyperthermie.) S. Widerõe.
59 *Traumatic Tetanus. (Zur Symptomatologie und Serumtherapie des Tetanus traumaticus.) G. Huber.
60 *Differential Pressure Procedures in Treatment of Stenosis of the Trachea. (Die Verwendung des Ueberdrucks zur Beseitigung von Trachealstenosen.) T. Nägeli.
61 Laceration of Lesser Trochanter. (Die isolierte Abrissfraktur des Trochanter minor.) T. Nägeli.

62 Fracture of the Scaphoid Bone. (Fall von Fractura ossis navicularis pedis.) J. Brodsky.
63 The Bacterium Prodigiosum in a Knee Effusion. (Ueber den Befund des Bacterium prodigiosum im Exsudat einer Gonitis.) H. Freysz.
64 *Repair of Large Defects in the Abdominal Wall and Rectal Prolapse. (Zur Technik der operativen Heilung grosser Bauchbrüche und Mastdarmprolapse.) H. Brun.
65 *Bismuth Poisoning. (Experimentell-klinische Beiträge zur Frage der Wismutvergiftung.) F. Zollinger.
66 Fracture of the Lower Jaw. (Ueber die Frakturen des Unterkiefers und ihre Behandlung.) F. Egger.

51. **Operations on the Anterior Mediastinum.**—Sauerbruch reports four cases in which he opened the anterior mediastinum to remove a tumor; it proved inoperable cancer in three cases. In the fourth case he was able to remedy by this means suffocation from compression of the trachea by an intrathoracic goiter. Instead of dividing the sternum across to obtain access to the mediastinum, he slit the sternum lengthwise and found this a valuable innovation. The skin was incised in a slightly curving line from the neck, along the sternum, and curving a little toward the nipple. He gives the details of the technic, and says that this longitudinal incision, even when the tumor proves inoperable, yet gives great relief by enlarging the chest wall in front and reducing the pressure on the organs and vessels below. This effect was particularly noticeable in one of his three inoperable cases. He reports further remarkable improvement in a case of exophthalmic goiter in which he removed the extremely large thymus. The patient was a young woman, a waitress at Davos, with typical exophthalmic goiter and pronounced myasthenia. Even chewing was difficult on account of the weakness of the muscles involved, and the girl was unable to feed herself. No improvement was observed after ten weeks' rest in the hospital; then the right superior thyroid artery and vein were ligated, but no improvement followed except that the goiter gradually decreased slightly in size. The general symptoms had become aggravated. Under the influence of Garrè's case of improvement after thymectomy and Oppenheim's statement that myasthenia is particularly liable in exophthalmic goiter in which there is enlargement of the thymus, Sauerbruch enucleated the thymus, which was very large. He gives an illustration of the three parts in which the thymus was removed, the total weighing 49 gm. The general condition gradually improved and the blood picture slowly returned to normal. The eyeballs subsided so that the lids were able to cover them; the pulse rate dropped from 110, 120 or 140 permanently to 100, and the patient is able to be up and about and climb stairs. He entered the mediastinum through Garrè's collar incision. The three lobes of the thymus readily shelled out from inside the capsule. The goiter was very soft and vascular, but this was unmolested.

52. **Reenforcing Herniotomy Wounds with Periosteum.**—Henschen reviews the literature on the subject of the repair of large defects in the abdominal wall, with or without alien or autoplastic supports, and then describes his favorable experience with a free flap of periosteum taken from the leg and placed on top of a fascia flap, to remedy a very large abdominal hernia opening following a suprapubic incision on the bladder. Periosteum seems to be peculiarly adapted for the purpose, he says, but it is important to have its fibers run parallel with those of the fascia flap and also the fibers in the abdominal wall.

53. **Operative Displacement of Goiter.**—Henschen reports three cases and cites several on record in which an enlarged goiter causing suffocation was pushed into a new site near by, thus relieving the air passages and vessels from compression without inflicting on the patient the loss of the thyroid or of more than half of it. He reviews the various technics that have been followed: The thyroid can be pushed over or under the muscles by five different methods or the new bed for it can be in front of the muscle, according to seven different methods. The choice depends, naturally, on the conditions in the individual case. In his three cases he worked the goiter, or the half left after partial thyroidectomy, through a slit in the sternocleidomastoid muscle, "like a shirt stud," and held it in place with a suture or two to shorten the slit. The thyroid did not seem to change in size or its circulation suffer in any way from this premuscular dislocation.

54. **Cancer of the Pharynx.**—Schumacher reports a series of 136 cases of cancer of the pharynx at the Zurich surgical clinic during the last thirty years; in eighty-two, conditions were found absolutely inoperable. He thinks that this suggests carelessness on the part of the internists first consulted; in many instances the patients had been treated for weeks and months for mere "sore throat," and the proportion of such cases is no smaller now than in previous decades. The total immediate mortality in the fifty-nine operative cases was 35 per cent.; twenty-five of the thirty-two patients leaving the hospital in good condition died of recurrence within one year; five died in less than four years, and only three of the total 136 patients survived for more than five years, one of this group dying the tenth year from recurrence in a gland. The survival of an average of seven months scarcely compensates for the severe mutilating operation; the patients do not have time to become accustomed to the consequences of the operation before recurrence is on them. His conclusion is that cancer of the pharynx requires the most radical intervention if any is attempted; the tendency to a conservative technic at the Zurich clinic is perhaps the reason why the results compare so unfavorably with those reported by Gluck with his unsparing, radical technic.

57. **Accessory Thyroid at Base of Tongue.**—Walther states that sixty-nine cases of an accessory thyroid in the root of the tongue are on record, and adds two new cases to the list. His patients were women of 40 and 50, of cretinoid aspect; the tumor at the base of the tongue had been first noticed twenty-six and one year before the operation. The growth showed plainly in the Roentgen picture; it proved to consist of thyroid structure. It is important to think of the possibility of an accessory thyroid in such cases, as also to examine whether the tumor may not be the only thyroid, in which case its removal might be followed by myxedema.

58. **Fever-Producing Influence of Salt Solution.**—Widerõe's animal experimentation has demonstrated that salt solution and Ringer's solution have an unmistakable effect in raising the temperature, which is not observed with sugar solution. The sugar solution, besides this advantage for infusion, has the further advantage of supplying nourishment to the patient.

59. **Traumatic Tetanus.**—Huber devotes nearly a hundred pages to the detailed report of sixty-nine cases of traumatic tetanus observed at Zurich in the last thirty years. In four cases the portal of entry was an erosion in mouth, nose or uterus. Serotherapy was applied in thirty-eight cases, but no benefit was unmistakably apparent in any case, and the mortality was not reduced. The only chance for it to do good, he thinks, is when it is applied in prophylaxis. Only eleven of the total sixty-nine patients recovered; in two the incubation had been five and seven days, in the others from ten to seventeen days. The antitetanus serum used was from the Berne serum institute in charge of Tavel and Kolle. The mortality of the thirty-eight serum-treated patients was 81.58 per cent., while it was only 64.5 per cent. of the thirty-one patients of the anteserotherapy years.

60. **Differential Pressure Procedures in Treatment of Stenosis of the Trachea.**—Nägeli describes a case in which an elderly woman was suffering from extreme dyspnea from compression of the trachea by a thyroid cancer. As the preparations for its removal were being made, the apparatus to induce positive differential pressure was applied and at once all dyspnea ceased, the stridor was arrested, and the cyanosis subsided; the mask was removed for a moment when the suffocation at once returned but was banished again on reapplication of the positive pressure. This was confirmed again and again, the conditions requiring tracheotomy. The operation was carried to a successful conclusion and the woman survived for nine months. Research on animals was then undertaken to ascertain whether the differential pressure procedure could actually relieve stenosis of the trachea to such an extent as this case suggested. The outcome was a complete confirmation, and demonstrated further that it is immaterial whether the overpressure is with ordinary air or with oxygen; the effect is

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mechanical and is most marked when the trachea is intact and the compression is from without. In case of cicatricial stenosis, the benefit is less pronounced. The method is peculiarly advantageous in that under the positive pressure the operation can be done with a minimal amount of anesthetic. It is proving a most valuable aid as an adjuvant to goiter operations, preventing the collapse of the trachea after removal of the thyroid which has been compressing it; the overpressure thus averts the necessity for tracheotomy which otherwise might be necessary.

64. **Repair of Large Defects in the Abdominal Wall.**—Brun gives a Roentgen ray picture of a square of silver filigree used years before to reenforce the suture after a herniotomy. The filigree has changed its shape to some extent, is broken and torn, and shows a number of sharp projecting points of wire where it is torn. He suggests that it might be better to use a pad made of small silver rings, possibly a double pad, like an iron ring pot scraper, or perhaps, a silk net might be better still. In conclusion, Brun describes the successful cure of prolapse of the rectum by a strip of fascia, taken from the thigh, which is run around just above the anus, drawing it up to close the aperture enough to restrain the tendency to prolapse of the bowel above. He gives an illustration of the needle devised for the purpose; it is coiled like a snake, almost in a circle, at right angles to the handle. This method is particularly good for the elderly and for children.

65. **Bismuth Poisoning.**—Zollinger's experimental research confirms the importance of getting all the bismuth out of the system as rapidly as possible when symptoms from it develop, and warm olive oil is recommended for this, especially when the poisoning is from a Beck fistula. The symptoms of bismuth poisoning from external application are cited as fever, headache, nausea, difficulty in swallowing, stomatitis, blue line on the gums, nephritis, convulsions and lockjaw. With internal administration the symptoms occur very rapidly and run a rapid course, especially in children. Intense cyanosis, diarrhea, dyspnea and death from arrest of the respiration formed the symptoms in two infants one and two years old. No changes in the buccal mucosa were observed in these cases. In another case there was a metallic taste in the mouth, blue line and erosions in the lining of the cheeks. Zollinger thinks that the symptoms in this latter case indicate bismuth poisoning while in the two others the trouble was more a nitrite poisoning.

Centralblatt für die Grensgebiete der Med. und Chir., Jena

February 17, XV, No. 11-13. Last indexed March 2, p. 663

67 *Acute Non-Suppurating Thyroiditis. (Die acute nicht eitrige Thyreoiditis.) W. Hagen.

67. **Acute Non-suppurating Thyroiditis.**—Hagen reviews what has been published on this subject and reports a case personally observed. In his case the thyroiditis developed in connection with a duodenal ulcer; in twelve cases on record polyarthritis and in eleven acute tonsillitis had just preceded the thyroiditis.

Berliner klinische Wochenschrift

February 12, XLIX, No. 7, pp. 289-336

68 *Bacteriologic Diagnosis of Thyroid. (Die bakteriologische Typhusdiagnose auf Grund von neueren, in der praktischen Typhusbekämpfung gesammelten Erfahrungen.) W. Gaehtgens.

69 *Internal Ear and Tendon Reflexes. (Labyrinth und Sehnenreflexe.) O. Beck and P. Biach.

70 *Toxic Action of Salvarsan. (Zur toxischen Wirkung des Salvarsans.) G. Stümpke and E. Bruckmann.

71 *The Epiphanin Reaction in Syphilis. (Ueber Untersuchungen mit der Epiphaninreaktion bei Syphilis.) F. M. Meyer.

72 Pharmaceutical Evils. (Pharmaceutische Missstände.) J. Ruhemann.

73 The German Red Cross in the Italian-Turkish Campaign. (Vom Türkenkrieg.) F. A. Theilhaber.

68. **Prophylaxis of Typhoid.**—Gaehtgen's research confirms the fact that search for typhoid bacilli in the secretions of the tonsils and throat will seldom give positive results. The occasional finding, however, of typhoid bacilli in ulcerations on the pharynx sustains the importance of scrupulous care of the mouth as indispensable for effectual prophylaxis of typhoid. The sputum should be thoroughly sterilized. He cites a case in which a maid contracted typhoid from eating what was left from the meals of a typhoid patient. Bacilli were cultivated from the stools in 71 per cent. of his total material during the first week, and from the blood in 63 per cent. During hot weather the typhoid bacilli are crowded out by proliferation of other bacteria, so that the findings even in the stools may be negative.

69. **Relations Between the Internal Ear and the Tendon Reflexes.**—Beck and Biach tested the knee-jerk of patients and then poured cold or hot water into the ear until nystagmus was induced and then tested the knee-jerk again and again, comparing the responses on both sides. The tendon reflexes on the side involved were exaggerated, but only one of the superficial reflexes, the Babinski toe reflex, was exaggerated. All the other superficial reflexes were apparently unmodified.

70. **Toxic Action of Salvarsan.**—In one case jaundice developed and in the other herpes zoster after intravenous injection of salvarsan. The jaundice appeared each time after the two injections of salvarsan, which is cited as evidence of the possibility of a pure toxic jaundice.

71. **Epiphanin Reaction in Syphilis.**—Meyer has applied this test (described in THE JOURNAL, Jan. 21, 1911, p. 228) to the serum of 100 patients and found that it revealed the presence of syphilis with constant regularity. Positive findings were obtained also in a few cases of acute infections or cancer, but the curve was entirely different from that in the syphilitic cases.

Correspondenz-Blatt für Schweizer Aerste, Basel

February 10, XLII, No. 5, pp. 145-176

74 *Fatal Lead Poisoning from Snuff. (Fall von tötlicher Bleivergiftung durch Schnupftabak.) E. Stadler.

75 Digestive Disturbances in Infants and Their Treatment. (Die Ernährungsstörungen im Säuglingsalter und deren Behandlung.) E. Wieland. Commenced in No. 4.

74. **Fatal Lead Poisoning from Snuff.**—A young housewife presented symptoms of lead poisoning, optic neuritis and finally a brain affection from lead poisoning, which soon proved fatal. The poisoning was traced to the lead foil wrapping of packages of snuff, of which the young woman had consumed 10 gm. a day for months.

Deutsche medizinische Wochenschrift, Berlin

February 15, XXXVIII, No. 7, pp. 297-344

76 *Alcohol Injections in Trifacial Neuralgia. (Behandlung der Trigeminusneuralgien mit den Schloesserschen Alkoholeinspritzungen.) J. Dollinger.

77 Experimental Research on the Complement-Binding Antibodies in Tuberculosis. (Bedeutung der komplementbindenden tuberkulösen Antikörper.) F. Schieck.

78 Embryonal Cells Behave Like Cancer Cells in Respect to Blood from the Umbilicus and Retroplacental Serum. (Verhalten embryonaler Zellen gegenüber Nabelblut und Retroplasentarserum.) R. Kraus, K. Ishiwara and J. Winternitz.

79 Relations Between Natural Immunity and Antibodies. (Beziehungen zwischen natürlicher Immunität und spezifischen Serumstoffen.) G. Seiffert.

80 Difference in Action of Morphin and Opium on the Intestine. (Unterschied in der Wirkung des Morphins und des Opiums auf den Darm.) E. Popper.

81 Results of Combined Salvarsan and Mercury in Treatment of Syphilis. (Erfolge der kombinierten Salvarsan-Quecksilberbehandlung bei Syphilis.) W. Scholtz. (Diagnostische und therapeutische Bedeutung der Spirochaeta pallida nebst Bemerkungen über die wirksamste Bekämpfung der Syphilis.) E. Hoffmann.

82 Abnormal Lime Metabolism Responsible for Rachitis. (Neue experimentelle Untersuchungen über die Pathogenese der Rachitis.) W. Dibbelt.

83 Groove Drill for Puncture of the Brain. (Verwendung eines Rinnenbohrers zur Hirnpunktion.) O. Goetze.

84 Twin Extra-Uterine Pregnancy. (Zwillingsschwangerschaft mit heterotopem Sitz der Früchte.) L. Pernice.

85 Traumatic Appendicitis. (Zur Frage der traumatischen Appendicitis.) F. Brüning.

86 Depressing Action of Roentgen Rays on Growth of Sunflower Seeds. (Zur Kenntnis der biologischen Wirkung der Röntgenstrahlen auf das Wachstum der Pflanze.) J. Wetterer.

76. **Deep Injections of Alcohol for Trifacial Neuralgia.**—Dollinger's experience confirms that of others in regard to the ability of deep injections of alcohol to arrest and cure trifacial neuralgia for a time. In the majority of cases the neuralgia returns in from one to five months, he says, but rarely in as intense a form as before, and another injection cures it anew. In some cases there has been no more pain for over a year to date. Severing and stretching the nerve give only transient relief. The alcohol injections have materially

restricted the field for the Gasserian operation, which is still a very serious affair on account of the frequently severe bleeding. Since Dollinger has been making the alcohol injections he has not found it necessary to remove any Gasserian ganglions, but would not hesitate to do this if the patient's age, social position, business, etc., made it especially important to relieve him once and for all permanently of his neuralgia.

Medizinische Klinik, Berlin

February 18, VIII, No. 7, pp. 253-302

87 *Anaphylaxis as Explanation of Sudden Death After Burns. (Ursachen des Verbrennungstodes.) M. Heyde.
88 Is Name Exophthalmic Goiter Outgrown? (Sind Begriff und Name der Basedowschen Krankheit beizubehalten?) A. Krecke.
89 Vaccine Therapy in Gonorrhea. (Behandlung der Gonorrhoe und ihrer Komplikationen mit Gonokokkenvaccin.) F. Hagen.
90 Migration of Foreign Body from Right into Left Bronchus. (Zur Diagnose der Bronchialfremdkörper.) F. Barnes.
91 Epileptic Seizures from Appendicitis. (Epileptische Krämpfe infolge Appendicitis.) F. Berger.
92 Determination of Hemoglobin Content of the Blood. (Zur Methodik der Hämoglobinbestimmung.) G. Maly.

87. **New Point of View for Treatment of Burns.**—Heyde comments on the obscure causes of death in fatal cases of burns, saying that even larger areas of skin may be destroyed by scalping or other accident which yet cause no special disturbance, while in case of a severe burn the physician has always had to reckon with some mysterious factor which may prove rapidly fatal at any moment. This mysterious factor, Heyde thinks, is a condition of anaphylaxis induced by absorption of substances from the burned tissues which act like an antigen; after a certain time the body becomes sensitized and any further absorption entails fatal anaphylaxis phenomena. The disturbances observed after contusions, torsion of internal organs and similar conditions in which there is considerable destruction of tissue, have a similar origin—absorption of albumin from the injured tissues. The albumin, modified by the destructive processes, acts like an alien albumin. This explanation of the fatalities after burns applies in particular to the cases in which the patient seems to be doing well for twelve or fifteen days and then suddenly succumbs with phenomena for which no postmortem explanation can be found. Heyde has had a number of cases of this kind, mostly in children and the burns were not particularly extensive. The children seemed to be doing well when suddenly they developed serious symptoms, the temperature dropping, and the little patients soon died in convulsions and delirium. Similar phenomena can be reproduced in animals at will by inflicting a small burn or reimplanting some of their own tissues incinerated outside; the animals die with symptoms of hyper-susceptibility, although the tissues implanted or the suspension injected is in itself harmless. These considerations suggest that it would be wise in case of burns to remove the burned tissue more thoroughly than has been the practice hitherto. Heyde adds that calcium chlorid and atropin have proved effectual antidotes to methyl guanidin, which fact might be utilized in combating the effects of burns.

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXIV, No. 2, pp. 195-382. Last indexed January 20, p. 233

93 *Senile Osteomalacia. J. Reich.
94 Obliteration of the Appendix in Youth Result of Inflammation, in Age Result of Sclerous Changes. (Zur Frage der Appendixobliteration.) E. Miloslavich and K. Namba.
95 Acute Colitis. E. Sonnenburg.
96 Occurrence of Zones of Hyperalgesia After Injuries of the Skull. (Auftreten von hyperalgetischen Zonen nach Schädelverletzungen.) K. Hanusa.
97 *Hydrops of Bile Apparatus. (Zur Frage des Hydrops des gesamten Gallensystems.) J. Berg.
98 *Sodium Nucleinate in Prophylaxis of Peritonitis. (Beobachtungen und experimentelle Untersuchungen über den Wert der Injektion des nukleinsauren Natriums bei der Prophylaxe der operativen Infektion des Peritoneums.) E. De Paoli and A. Calisti.
99 *Bile Peritonitis Without Perforation of Bile Passages. (Galligе Peritonitis ohne Perforation der Gallenwege.) G. Doberauer.
100 *Operative Treatment of Cerebellar Cysts. (Zur Kenntnis der operativen Behandlung der Kleinhirncysten.) A. v. Eiselsberg and L. v. Frankl-Hochwart.
101 The Leukocyte Count in Tetanus. (Ueber die Leukocytose bei Tetanus.) H. Bennecke.
102 *Operative Treatment of Tumors of Spinal Meninges. (Operative Behandlung der Geschwülste der Rückenmarkshüllen.) L. M. Pussep
103 Plastic Operations on the Esophagus. (Zur experimentellen Pathologie und Chirurgie des Schluckapparates—Oesophagoplastik.) J. Schreiber.
104 *Connection Between Cancer in Ovaries and Stomach. (Primäres oder metastatisches Ovarialcarcinom?) O. Schaeffer.

93. **Blunders in Treatment of Senile Osteomalacia.**—Reich says that the failure to recognize senile osteomalacia is peculiarly disastrous, as it can be so easily cured by phosphorus and cod liver oil. It is generally mistaken for rheumatism, sciatica, or other neuralgia, and is treated for years unavailingly on this mistaken basis. The senile type of osteomalacia is distinguished by its slow course, the disturbances coming on very insidiously and slowly. The pains, however, appear early and persist tenaciously. They are generally felt first in the chest and sacrum, then in the thighs and later in the pubis; the pelvis is seldom involved, and this is one reason why osteomalacia is so seldom suspected in patients outside of a pregnancy. The pains are aggravated by contact, and those in the chest are rendered very severe by coughing or sneezing, a point useful to remember in differentiation. The pain in the thigh is aggravated by pressure on the thigh from any side; with sciatica this occurs only with pressure on one side as a rule. Contracture of some of the muscles of the legs is common in senile osteomalacia, especially contracture of the adductors, causing a peculiar gait, the typical aspect of the patients being further characterized by a deep groove across the epigastrium and by their growing shorter in stature. The muscular contracture sometimes subsides in bed, but returns as the patient gets up. Paralysis was never noticed in the six cases reported in detail, but vasoconstrictor phenomena were common, and the disappearance of these vasoconstrictor symptoms under phosphorus confirms their dependence on the osteomalacia syndrome. Reich has never encountered any trophic disturbances, but Curschmann has reported two cases with such. In some of Reich's cases the patients had been treated for years for rheumatism or sciatica, without benefit; under the phosphorus the pains promptly subsided and marked and durable benefit followed. He uses a 0.01 per cent. solution of phosphorus in cod liver oil, the patient taking from three to five teaspoonfuls of this daily. It has to be kept up for months, but he has never noticed any untoward by-effects from its use even when it was kept up for a year. During the first two or three weeks the patients had better stay in bed. On account of the osteomalacia pains in the chest, the patients breathe superficially and bronchitis is common among them, with danger of pneumonia until they improve under the phosphorus. He thinks that this phosphorus treatment should be given a trial in every case of osteomalacia at any age before operative measures are applied. He adds that we have no reason to assume that the internal secretion of an organ dries up with cessation of the genital functions of the organ; the internal secretion of the ovaries, for instance, may continue, become excessive or perverted, and may be the cause of osteomalacia in the elderly. Two of the six patients were men; one patient was a virgin of 64, and the first symptom in her case was that her skirts seemed to be too long for her, there was no pain until several months later. Another patient had noticed that she was growing stiffer, and that it was difficult for her to stoop over, her skirts seemed to grow longer, and her feet bigger and painful. The symptoms in this case had continued for twenty years before the affection was properly diagnosed and practically cured by the phosphorus-cod liver oil. Trauma induced an exacerbation of all the symptoms in one case; in another the condition was aggravated by an existing valvular defect. Another patient was a man of 65, who had been treated ineffectually during seven years for assumed sciatica, but was cured in a few weeks by the phosphorus. He measured 5 cm. less than before the osteomalacia developed.

97. **Case of "White Bile."**—Berg reports a case of partial gall-stone obstruction of the common bile duct, in which the bile in the biliary passages seemed to have turned to water. The change occurred acutely, together with acute infection of the biliary passages. The patient had had symptoms of cholethiasis for five years with recurring infection of the bile ducts. The case shows that changes in the chemical com-

position of the bile may be a factor in the production of stones; attention hitherto has been directed too exclusively to stasis and infection as the main factors.

98. **Prophylaxis of Peritonitis by Sodium Nucleinate.**—The clinical and experimental experiences related in this article seem to show that prophylactic injection of sodium nucleinate in operations on the abdomen is scarcely needed in well equipped clinics, except when operative infection from the organ being removed is feared. But conditions are different when the surgeon does not have skilled assistance at his disposal; under such conditions the prophylactic injections may help and will give him greater confidence in his operating. The power of resistance to infection seems to be increased in the peritoneum by the preliminary injections, but this is not manifest in the subcutaneous tissue. Paoli and Calisti had only one death from septic peritonitis among the 200 patients given the prophylactic injections, a far better showing than in preceding similar series. At Eiselsberg's clinic, also, the mortality from operative infection dropped from 9.6 per cent. to 4.6 per cent. during the five years of the prophylactic injections, but he does not ascribe this improvement to the injections, but rather to improved technic. This Paoli and Calisti think is unjust; they believe that the credit should be given the injections for some at least of this better showing.

99. **Bile Peritonitis Without Perforation of the Bile Passages.**—Doberauer has recently encountered two cases of peritonitis with considerable bile in the abdominal cavity, in which he was unable to detect the slightest lesion in the walls of the biliary passages. The permanent recovery after draining the abdomen and gall-bladder confirmed the assumption that the walls were intact. A contusion in one case and typhoid fever in the other were the predisposing factors for the seeping of the bile through the walls.

100. **Cerebellar Cyst.**—In the case reported, the type of the headache, the pain radiating to the back of the neck, the vertigo, inability to stand, bilateral choked disk, and slight disturbances in swallowing pointed to a tumor in the posterior cranial fossa and the loss of the right corneal reflex apparently located the tumor on the right side. It proved to be a cyst in the cerebellum, which was successfully evacuated at two sittings six days apart. After the removal of the cyst the symptoms subsided, but the patient's speech became slightly defective, with inability to pronounce certain letters and an echoing repetition of certain sounds. The improvement realized has been permanent during two years to date.

102. **Tumors in Spinal Meninges.**—Pussep reviews the literature on tumors in the spinal cord and membranes and reports with minute neurologic details three cases of tumors in the spinal meninges which were successfully removed in Bechterew's service at St. Petersburg. The benefit was prompt and pronounced, the spinal cord functions being promptly restored even in the case in which the cord had been compressed by the tumor until it was only 0.5 cm. thick. The cord fibers had not been broken, except in the third case, and in this instance the functions of the broken fibers could not be restored. The prognosis for mere compression is excellent, but only partial restoration of function can be anticipated when any fibers are broken. He describes the sequence in which the motor and sensory disturbances gradually righted themselves after the operation.

104. **Connection Between Cancer in Stomach and Ovaries.**—Schaeffer reports a case in which a primary cancer in the right ovary progressed without any interference with menstruation, which was regular and painless. The patient was a v-para of 37, who complained merely of oppression in the stomach during the last two months; the umbilicus had been protruding a little for four months. A tumor was palpated in the left pouch of Douglas and some ascites was found in the abdomen. The exploratory laparotomy revealed a cancer in the left ovary with metastases spreading upward to the stomach, where a knobby infiltration could be felt, evidently secondary to the ovarian tumor. The patient died a month later. There had been absolutely no symptom in this case to call attention to the ovarian cancer. When the umbilicus was seen to protrude this was evidently a sign of metastatic ascites, and the malignant disease must have been then far advanced. There is still a possibility, however, that a prompt laparotomy at that time might have permitted the discovery and removal of the primary cancer and saved the stomach from involvement. Schaeffer urges the application of all the chemical and roentgenoscopic tests for stomach and intestinal functioning and findings in cases of cancer in the ovary, even when there is nothing to call attention to the gastro-intestinal tract. All preparations should be made for resection of the stomach at need in operating on the ovaries, and he advises removal of both ovaries whenever resection of the stomach is to be done, and removal of both ovaries when one is found cancerous.

Münchener medizinische Wochenschrift

February 13, LIX, No. 7, pp. 345-400

105 *Roentgenoscopic Examination of Motor Functioning of the Stomach. (Prüfung des Magens auf "rohe Motilität" mittels der Durchleuchtung.) G. Holzknecht.
106 Salvarsan in Syphilis. (Zur Frage der Abortivbehandlung der Lues mit Salvarsan.) K. Stern.
107 Salvarsan in Anthrax. (Milzbrand und Salvarsan.) G. Schuster.
108 Postural Influencing of Intracranial Circulation. (Ueber die Beeinflussung der Blutzirkulation im Schädelinnern durch die sogen. Sternokleidostellung des Kopfes.) O. Muck.
109 *Silicic Acid in Milk Sterilized in Glass Bottles. (Die Ueberführung von Kieselsäure in die Milch beim Sterilisieren in Glasflaschen.) H. Schulz.
110 Vaccination of Rabbits. (Die Kaninchenimpfung.) W. Ponndorf.
111 *Typhoid Carrier in Institution. (Typhusbazillenträgerin in einem Erziehungsinstitut.) K. Bernhuber.
112 Vertical Strabismus. (Ein Fall von Höhenschielen vor 120 Jahren, nach Selbstbeobachtung des Kranken—und einige von heute.) W. Schoen.
113 Case of Alkaptonuria with Ochronosis. V. Poulsen.
114 Treatment of Febrile Abortion. (Darf dem praktischen Arzt eine Behandlung des fieberndn Aborts nach bakteriologischen Gesichtspunkten heute schon zugemutet werden?) E. Holzbach.
115 Dosage of Roentgen Rays. (Zur quantitativen Messung der Röntgenstrahlen bei therapeutischer Verwendung.) E. Runge.
116 *Chronic Cardiac Insufficiency and Strophanthin Treatment. (Chronische Herzinsuffizienz und intravenöse Strophanthintherapie.) A. Fraenkel. Commenced in No. 6.

105. **Test for Motor Functioning of the Stomach.**—Holzknecht and Fujinami report experiences which show that in case of pylorospasm 200 c.c. of water is generally passed along out of the stomach after the normal interval of sixty or seventy minutes or less, while with stenosis of the pylorus the interval is materially longer. The particulars are most instructively shown by the sinking and floating capsules, each containing some bismuth in an insoluble capsule, one containing enough air to make it float. As the water is expelled, the floating capsule sinks lower and lower until it can be seen lying beside the heavy capsule. They call this the "test for raw motility," and say that it will often clear up the diagnosis after failure of all other measures.

109. **Silicic Acid, from the Bottles, in Sterilized Milk.**—Schulz states that even a good quality of glass yields up silicic acid to the milk when it is long boiled in the bottle, and a poor quality of glass yields it constantly even with brief boiling. He found the proportion of SiO_2 in a liter of untreated milk from 0.0004 to 0.0064 gm., but the proportion increased by 0.0028 to 0.0116 after boiling for five minutes in a bottle of good glass, while the increase was from 0.0016 to 0.03 when boiled in a cheap glass bottle. He thinks these amounts of silicic acid passing constantly into the milk given to infants are sufficient to explain at least the obstinate constipation in certain bottle-fed infants, and possibly to throw light on infantile scorbutus as the result of an excess of silicic acid.

111. **Typhoid Carriers.**—Bernhuber relates that a boys' school has had a number of cases of typhoid fever in the last ten years, sixteen between 1907 and 1910, with three deaths, and large sums of money were spent in perfecting the sanitary arrangements, but without eradicating the typhoid endemic. Three simultaneous cases in 1910 roused the authorities to make a bacteriologic examination of all the inmates, and the cook was found to be a chronic bacilli carrier. She had had severe typhoid fever twenty-two years before, and an attack of jaundice eight years later, and had

been in the employ of the institution since its opening. The cook succumbed not long after this discovery to heart disease, and typhoid bacilli were found in all the organs examined. During the year since her death the institution has been free from typhoid.

116. **Intravenous Strophanthus Treatment of Chronic Heart Disease.**—Fraenkel advocates systematic repeated intravenous injections of strophanthin when digitalis is not borne or has lost its effect in chronic heart disease. In a typical case related in detail of chronic valvular defect and degeneration of the myocardium, with lost compensation and congestion in the liver, digitalis was not borne by the mouth, but, under small intravenous injections of strophanthin, the patient was kept in fair condition for a year and a half, and then treatment was suspended as the improvement was so marked. She was a woman of 48, and she had required tapping eight times and eighty-five intravenous injections of strophanthin had been made in the eighteen months. He commenced with half a milligram and repeated the injection only when the favorable effect had died out. The doses ranged from a quarter to a whole milligram, the total amounting to 0.0845 gm. strophanthin. At the end of the course the ascites had nearly entirely subsided, the liver was much smaller than at first, and the patient could walk on level ground without shortness of breath and she was able to sleep without the morphia she had previously required. Progress in this method of therapeutics, he says, is not so much in the choice of a preparation of strophanthus as in the systematic and cautious manner of its use and study of indications requiring the medication by the mouth or by the intravenous route.

St. Petersburg. medizinische Zeitschrift

February 14, XXXVII, No. 5, pp. 33-46

117 *Underfeeding as a Therapeutic Measure. (Die Unterernährung in der Therapie.) Hermann.

117. **Underfeeding as a Therapeutic Measure.**—Hermann cites a number of instances showing how animals can do without food for months at a time, even outside of hibernation. The Rhine salmon, for instance, comes up from the sea to the Upper Rhine to spawn every year, and during the four up to fourteen months in the river it eats nothing, its stomach being found constantly empty. The ovaries during this time grow from 0.4 per cent. to 19 or 27 per cent. of the body weight, mostly by transformation of the reserve substances in the muscles; the eggs in the roe are rich in nuclein and lecithin while the muscles are drained of these elements. Male seals also go without food, he says, during months at a time in the rutting season. These and similar examples show that living beings can exist without food for months at a time in good health. Hermann has had a patient, a butcher of 35, at one time a hard drinker, whose mind became affected and he ate absolutely nothing for sixty days, merely drinking copiously of taars, an acid drink. At the end of this time his mental condition had so much improved that he became self-supporting again. Hermann knows of another case of this kind, a teacher, 56 years old, rather corpulent, who suddenly ceased to have any desire for food and took none for sixty days, merely drinking water freely. He lost flesh, but did not miss any of his classes, and when he began to eat again he was not especially hungry. His health did not seem to suffer in the least. Physiologic and other research has demonstrated that during fasting the brain loses least (0 to 3 per cent.), the heart 3 per cent., and the blood 17 per cent.; the spleen 63 per cent.; the liver 56 per cent., and the muscles 30 per cent. Hermann thinks that these figures and other data which he cites confirm the fact that fasting for three or four days is not dangerous; the economy gains more than it loses, if the bowels are kept open. The benefit realized from a course of fasting can be estimated by analysis of the blood and of the excreta which shows the clearing out of waste products. The Karell cure, grape cure, vegetable day of diabetics, and similar courses of dieting are only a mild form of fasting. He quotes Dewey's statement that the fasting should be kept up until the body has got rid of all the toxic waste. When this point is reached, the individual is notified by return of an imperious appetite.

Therapeutische Monatshefte, Berlin

February, XXVI, No. 2, pp. 89-156

118 Theoretic Bases for Tuberculin Therapy. (Ueber die theraputischen Grundlagen der Tuberkulin-Therapie.) J. Bauer.
119 Theoretic and Clinical Bases for Internal Disinfection. (Innere Desinfektion.) J. Morgenroth.
120 Experimental Pharmacology. (Anwendungsgebiete der experimentellen Pharmakologie für die Therapie.) H. Januschke.
121 Availability for Food of Disintegration Fragments of Proteins in Place of the Ordinary Complex Proteins. (Ueber die Brauchbarkeit tief abgebauter Eiweisspräparate für die Ernährung.) F. Frank and A. Schittenhelm.
122 *Salicylate Salve in Rheumatism. (Zur perkutanen Salizyltherapie.) P. Scharff.
123 Scopolamin Solutions Do Not Keep Well and Should be Made Fresh. (Ueber die Haltbarkeit von Scopolaminlösungen in Ampullen.) H. Langer.
124 The Salt Content of the Air at the Seashore. (Salzgehalt der Seeluft.) W. Heubner, A. Loewy, F. Müller and W. Cronheim.

122. **Salicylic Medication Externally.**—Scharff has for some time been advocating a salicylic acid, turpentine and sulphur unguent, which in fifteen years' experience he has found extremely efficient in rheumatic and rheumatoid affections. Each of the four ingredients is active in combating the rheumatism, and the urine soon gives the reaction for salicylic acid, showing that the drugs are absorbed. The formula is:

℞	Acidi salicylici	10.
	Solve in ol. terebinthinæ	10.
	Sulphuris praecip. vel sublimati	
	Terebinthinæ	aa 40.

In a typical case described in detail it promptly cured a woman who had been absolutely helpless from rheumatism involving every joint and very painful. She was able to move only her head. The salve is applied to the parts and covered with oil silk or rubber tissue or dusted with powder. The oil silk generally sticks to the skin and may require no further dressing except the clothing to hold it in place. On exposed regions a starched dressing outside may be found useful to protect the part. The sensation ranges from an agreeable warmth to smarting, but the smarting is generally bearable and is gone in less than half an hour. The salve is left unmolested for from three to five days, and is then renewed if the skin is not too sensitive; otherwise a soothing application is made at first. He has cured in this way in a week all his patients with acute articular rheumatism, thus sparing the stomach the internal salicylic medication. He has found his salve useful also in myositis, sciatica and other neuralgias, in attacks of gout, tendon sheath lesions, contusions and sprains, the pain-soothing and hyperemia-inducing action of the salve under its air-tight covering promptly curing the trouble, especially when supplemented by massage and electricity.

Wiener klinische Wochenschrift, Vienna

February 15, XXV, No. 7, pp. 259-290

125 Tuberculosis of the Hilus of the Lung in Children. (Die Hilustuberkulose des Kindes im Röntgenbilde.) E. Sluka.
126 *Lordotic Albuminuria. (Zur Kenntnis der lordotischen Albuminurie.) F. Hamburger.
127 *Influence of Sex on Origin and Form of Heart Disease. (Ueber den Einfluss des Geschlechtes auf die Entstehung und Gestaltung von Herzkrankheiten.) M. Herz.
128 Research on Blood Serum with Cancer. (Aus dem Gebiete der Krebsforschung.) A. Krokiewicz.
129 Quarantine Experiences. (Quarantänestudien.) E. Wiener.
130 Breast-Nursing Propaganda. (Poliklinische Beobachtungen aus der Stillpropaganda.) E. Mayerhofer.
131 Psychotherapy. (Das psychagogische Heilverfahren.) H. Kahane.

126. **Albuminuria from Mechanical and Vasomotor Causes.**—Hamburger remarks that Jehle's discovery that lordosis induces albuminuria in some persons is certainly the greatest progress of recent years in the knowledge of albuminuria in general. It threw light at once on the albuminuria of puberty and orthostatic albuminuria, but it does not explain everything. Besides the mechanical factor of the impediment to the circulation in the kidney from the lordosis, there must be vasomotor factors at work. This is the only explanation possible for the cases in which under identical mechanical and physical conditions the albuminuria occurs on some days and not on others. In a recent case a boy of 13 had had headaches, sleeplessness, pains in the heart, and was losing flesh, all coming on after severe emotional stress. Examination two weeks later confirmed the severe neurosis affecting mainly the

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circulatory apparatus. The urine was free from albumin; the boy was then instructed to kneel down in extreme lordosis for five minutes. It caused nausea and vomiting and a syncope, and enormous amounts of albumin were found in the urine; it coagulated throughout on boiling. The previously rigid arteries became quite soft. Under valerian and clearing up of the misunderstanding causing the emotional stress, all symptoms completely subsided. In other cases the child would have albuminuria one day and not the next, although all conditions were alike. The same degree of lordosis or stasis in the kidney circulation will induce albuminuria in one child and not in another, and even in the same child at different times the response may vary.

127. Influence of the Sex on the Origin and Form of Heart Disease.—Herz comments on the rarity of true angina pectoris and Cheyne-Stokes breathing in women, while he has found mitral stenosis more common in them and aortic insufficiency more common in men. When a man has true angina pectoris and Cheyne-Stokes breathing, a serious lesion must be accepted with a fatal outcome before long. But when a woman presents this syndrome the outlook is much less serious. He has known women with enormously enlarged hearts and a blood pressure of over 200 mm. keep in subjectively fairly good condition for years. Climacteric sclerosis of the aorta and uterine myoma-heart have no analogies in men. The fat heart of women seems also a far less serious condition than in a man presenting the same symptoms—becoming easily fatigued, with shortness of breath on exertion and pounding heart beat. He has found that a cardiac neurosis is frequently associated with mitral stenosis in women. Men generally display remarkable tolerance to valvular defects. He has known a number of men with mitral insufficiency, left from rheumatism in youth, who seem to be little disturbed by it, although leading a long strenuous life; he has never encountered analogous cases among women. In his experience, valvular defects of rheumatic origin are not transmitted by men to their offspring, but by the mothers to children of both sexes, while arteriosclerotic contracted kidney is more often inherited by daughters from the mother and coronary sclerosis by sons from the father. The familial form of arteriosclerosis generally is inherited by one or the other sex in the family, seldom by both.

Zeitschrift für klinische Medizin, Berlin

LXXIV, Nos. 3-4, pp. 179-254. Last indexed February 10, p. 450

132 Experiences with the Rosenbach Tuberculin. (Erfahrungen mit Rosenbach'schem Tuberkulin.) R. Kobler and M. Plaut.
133 *Deforming Arthritis with Atrophy. (Die sogen. Arthritis deformans atrophica.) H. Beitzke.
134 Measurement of Pulse Energy: Sphygmobolometry. (Weitere Beiträge zur Kritik der Sphygmobolometrie und zur Verwertung ihrer Methodik.) R. Bahli.
135 Sensibility of the Skin. (Zur Lehre von der Hautsensibilität.) A. Goldscheider.
136 Favorable Influence of Meat Extractives on Utilization of Vegetable Food. (Ueber den Einfluss der Extraktivstoffe des Fleisches auf die Ausnützung vegetabilischer Nahrung.) H. Wolff.
137 *Pathogenesis of Polyneuritis. H. Eppinger and A. Arnstein.
138 Ice Test of Functional Capacity of Arteries Unreliable. (Der Kälteversuch als Mittel zur Funktionsprüfung der Arterien.) M. Hellendall.
139 Consumption of Oxygen in the Lungs. (Gibt es einen nennenswerten intrapulmonalen Sauerstoffverbrauch?) N. Zuntz.
140 Excretion of Urine and Salts in Diabetes Insipidus. (Bemerkungen zu der Arbeit von Porschbach und Weber: Beobachtungen über die Harn- und Salz-Ausscheidung im Diabetes insipidus.) E. Meyer.
141 Rise in Blood-Pressure After Removal of Both Kidneys. (Ueber Blutdrucksteigerung nach doppelseitiger Nierenexstirpation.) E. Mosler.

133. Deforming Arthritis with Atrophy.—Beitzke expresses surprise that so little attention has been paid to the worn places found so frequently in the joint cartilages at necropsy. He has been making a special study of them and has become convinced that these places become worn by friction aided by various mechanical causes, such as tight shoes. Then when some toxic products or infectious germs get into the body, these worn places supply a place of lesser resistance, and a deforming arthritis is set up. He gives the tabulated details in this respect from 200 cadavers, all but eighteen male and seventeen female cadavers showing joint changes, most common in the toes. Over 87 per cent. of 139 with chronic disease had these joint changes. They were rare in the young; occurred in 60 per cent. in the cadavers between 20 and 40, in 95 per cent. between 40 and 50, and in 100 per cent. after this age.

137. Lead Poisoning and Liver Disease as Factors in Polyneuritis.—Eppinger and Arnstein report a case of polyneuritis occurring in chronic lead poisoning which presented several unusual features. In a number of other cases cited polyneuritis was evidently due to liver disease, and in the lead poisoning case there were signs of this also. They think that the liver derangement has much to do with the development of the polyneuritis; some toxic product normally taken care of by the liver is allowed to remain unmodified or is modified in some abnormal manner, and it acts on the nerves, inducing the polyneuritis. The suggestion is tentatively advanced that the recent research on the peculiar sensitizing properties of fluorescent substances (Tappeiner and Hausmann) may explain the polyneuritis in these cases as the result of the action of urobilin in the blood—urobilin being a fluorescent substance. Hematoporphyrin might also be considered from this standpoint. In the lead-poisoning case the polyneuritis was of the Landry type and the patient presented intense urobilinuria and urobilinemia.

Zeitschrift für Urologie, Berlin

February, VI, No. 2, pp. 97-175

142 Shape and Location of the Kidneys. (Zur Morphologie und Topographie der Niere.) E. Wolff.
143 Anuria Years After Nephrectomy, Cured by Slitting Kidney Down to the Hilus. (Anurie bei Solitärniere.) D. Giordano.
144 *Mental Complications of Enlarged Prostate and of Prostatectomy. (Psychkomplikationen bei transvesikalen und perinealen Prostatektomien. Prä- und postoperative Geistesstörungen.) B. Guisy.
145 Stab-Wounds of the Kidney. (Zwei Fälle von Stich-Schnitt-Wunden der Niere.) P. D. Solowow.
146 Influence of Injection of Prostatic Secretion and of Prostate Cytotoxin. (Versuche mit Prostatacytotoxin.) J. Seibel.

144. Mental Disturbances with Hypertrophied Prostate.—Guisy has observed mental derangement as a postoperative complication in three of his last seventeen cases of prostatectomy. He called attention in 1896 to the frequency of mental disturbances in connection with malformations or various affections of the urogenital apparatus, including the prostate as well as the testicles. Insomnia, melancholia and hypochondria, in particular, frequently accompany chronic prostatitis of gonorrheal origin or follow venereal excesses. He reported three cases at that date; in one a man of 70 with senile hypertrophy of the prostate, had a sudden attack of mania in which he tried to cut his throat with a razor; another of 60 drowned himself; another, only 50 years old, with chronic prostatitis, developed chronic melancholia and avoided his wife and children. Guisy has encountered nine similar cases among his ninety-three prostate patients since, the mental disturbances ranging from changes in character, torpor and melancholia, with or without optic or auditory hallucinations, general tremor and twitchings, to maniacal attacks with or without a tendency to suicide. His experience seems to indicate that these psychoneuroses may be due not only to disturbances from the enlarged prostate, but may occur as a consequence of its removal, that is, of total prostatectomy. None of his patients had shown any previous tendency to nervous or mental disease. One of his patients a few days after perineal prostatectomy became irritable and melancholy and in six weeks maniacal attacks developed, recurring for nine months before the patient, a man of 69, regained his normal poise. In another case a man of 59 showed within a week after the prostatectomy a complete change of character, and in two months the melancholia with suicidal tendency required institutional care, and there has been no improvement since. Guisy observed a similar severe melancholia, after prostatectomy for severe urogenital tuberculosis, in a man of 29, who had borne without disturbance the removal of the left testicle and vas and the epididymis on both sides two years before. Guisy is convinced that the internal secretion of the prostate has a direct influence on the brain, while he does not think it has any special action on the testicles, or vice versa.

Zentralblatt für Chirurgie, Leipsic

February 17, XXXIX, No. 7, pp. 209-248

147 *Removal of Hypophysis Tumor Through Anterior Cranial Fossa. (Intrakranialer Weg zur Hypophysis cerebri durch die vordere Schädelgrube.) N. F. Bogojawlensky.

148 *Etiology of Scoliosis. (Neuer Beitrag zur Aetiologie der Skoliose.) V. Chlumsky.

149 Incision for Appendicectomy. (Zur Schnittführung bei Appendixoperationen.) K. Frankenstein.

150 Plastic Restoration of Anus After Resection of Rectum. (Anusplastik nach Exstirpatio recti.) C. Bayer.

147.—**Access to Hypophysis Through Anterior Cranial Fossa.**—Bogojawlensky reports a case in which he successfully exposed and removed a tumor in the hypophysis cerebri through an opening made by turning back a flap in the frontal bone, opening up the anterior fossa. The skin-bone flap was cut 9 cm. long, the incision about 2.5 cm. from the median line, and the incision at right angles to this was also 9 cm. long and at a distance of 2.5 cm. from the top of the orbit. Six weeks after the flap had been cut it was turned back, the dura cut in H-shape and turned back, and the patient's head allowed to hang down over the edge of the table, the end of which was raised about 30 degrees. The right frontal lobe was separated from the roof of the orbit, and this exposed a cleft 5 cm. broad in front, the optic nerve seen in its depths, nearly 8 cm. below. The tumor causing the trouble was distinctly visible in front of the optic commissure, and it was easily scooped out. The patient was a man of 35 who had had symptoms of a hypophysis tumor for two years. He recovered from the operation without the slightest drawback, except that a little effusion under the flap required release the next day. He was able to sit up in two weeks and in three weeks the acromegaly had already retrogressed considerably. Vision was not disturbed. The ease and successful outcome in this case are cited as establishing beyond question the superiority of this intracranial intradural mode of access through the anterior fossa, which permits ample oversight of the field and an aseptic operation.

148. **Origin of Scoliosis.**—Chlumsky has found that the fetus is liable to maintain a position in the uterus which induces a tendency to scoliosis. Born with this tendency, it requires appropriate correction from the start or a settled scoliosis results which it is difficult or impossible to correct later. The infant's spine should be examined as a routine measure, and any tendency to scoliosis should be recognized at once and corrected before it becomes chronic.

Zentralblatt für Gynäkologie, Leipsic

February 17, XXXVI, No. 7, pp. 193-224

151 Febrile Abortion. (Vorschläge für weitere Forschungen über den fieberhaften Abort.) E. Sachs.

152 Formation of Vagina Out of Part of Rectum; Second and Third Cases. (Zwei weitere Fälle von Scheidenbildung bei angeborenem Vaginaldefekt.) G. Schubert.

153 Technic for Pubiotomy. (Die prophylaktische Ablösung der Harnblase bei Ausführung der Pubiotomie.) Ruhl.

Gazzetta degli Ospedali e delle Cliniche, Milan

February 11, XXXIII, No. 18, pp. 177-192

154 Intravenous Infusion in Treatment of Cholera. (La cura del colera e risultati ottenuti colla flebociisi resa pratica con metodo speciale.) G. Marcolongo.

February 13, No. 19, pp. 193-200

155 Diaphragmatic Pleurisy. (Caso di pleurite diaframmatica.) L. Pagliori.

156 *Uterine Hemorrhage After the Menopause. (Le metrorragie dopo la menopausa.) Dalché and P. Roy.

156. **Uterine Hemorrhage After the Menopause.**—Dalché reports a number of examples of women of 57 to 67 years of age who had repeated uterine hemorrhages, but refused operative treatment for the suspected cancer, and after a few months the hemorrhages ceased and there has been no further disturbance to date. In one case there seemed to be a swelling in the broad ligaments, but nothing has been heard from it to date. In another case there seemed to be a return of menstruation for a time at 60, three years after the last traces of menstruation. The women had mostly had metritis years before, had borne numerous children and had more or less ptosis of the viscera. Cholelithiasis, gout, obesity, or heart, or kidney affection, or a mucous polyp—any of these is liable to induce uterine hemorrhage after the menopause. In one case the only apparent cause for the late uterine hemorrhage was lumbo-abdominal neuralgia.

Riforma Medica, Naples

February 10, XXVIII, No. 6, pp. 161-168

157 Effect of Fatigue on Blood and on Course of Infections. (Alcuni fenomeni che l'affaticamento produce sul sangue e nelle infezioni.) D. Scalfati.

Revista de Medicina y Cirugia, Havana

February 25, XVII, No. 4, pp. 91-124

158 The Laboratory in Prophylaxis. (El laboratorio como medida profilactica.) J. F. Arteaga.

159 Vaccination Against Typhoid. (La vacunacion contra la fiebre tifoidea.) L. M. Cowley.

Hygiea, Stockholm

January, LXXIV, No. 1, pp. 1-128

160 *The Mechanism of Visual Accommodation. (Hur jag fann den intrakapsulära ackommodationsmekanismen.) A. Gullstrand.

161 *Solidified Carbon Dioxid Snow in Treatment of Tumors of the Skin. (Om behandling af hudtumörer medels kolsyra i fast form.) G. Nyström.

162 *Pregnancy as a Predisposing Factor for Malignant Disease, Especially for Gastric Cancer. (Några fall af cancer ventriculi i samband med graviditet jämte betraktelser öfver graviditeten såsom ett disponerande moment för uppkomsten af kancer.) F. Lindstedt.

160. **Mechanism of Visual Accommodation.**—This is the address made by Gullstrand on receiving the Nobel prize for his research on dioptrics.

161. **Carbon Dioxid Snow in Treatment of Superficial Tumors.**—Nyström is enthusiastic over the fine results he obtained in treatment of epitheliomatous tumors with carbon dioxid sticks, and reports the experiences on which this opinion is based. The harmlessness of this method of treatment, the simplicity of its application, the possibility of exact dosage, relative painlessness, smooth effectual action, the ideal cosmetic result and the inexpensiveness of the method are its chief advantages, he declares. He gives pictures of several of the fourteen epithelial cancers or rodent ulcers he has treated in this way. One patient had a cancer of the cheek with five metastatic nodules around, the condition absolutely inoperable. Under combined carbon dioxid treatment and thermocauterization the surrounding nodules and then the extensive cancer occupying the entire lower half of the cheek gradually retrogressed. In January she had been turned away from the surgical clinic as inoperable, but the photograph in September shows not a trace of the former malignant disease except a small scar left where the cancer had eaten into the parotid gland. His experience with warts was favorable when the wart protruded, but less so when the growth extended downward into the tissues instead of projecting above. The same distinction was apparent in the treatment of angiomas; in his thirty cases the protruding were rapidly benefited, the flat and deep felt the influence less, and could not be cured except by prolonged and intense applications, and not always even then.

162. **Pregnancy as Predisposing to Cancer.**—Lindstedt gives the particulars of four cases in which symptoms of gastric cancer developed during a pregnancy and the patients died a month or so after delivery. The women were 22, 25, 31 and 33 years old; two were primiparæ, one had borne a child and one two children previously. The cancer ran a remarkably rapid course in all the cases. Among the 743 gastric cancer cases examined post-mortem at Stockholm, the women far outnumbered the men in the ages under 35, while the men far outnumbered the women after this age. Lindstedt tabulates these and other statistics from various clinics and countries, a total of thirty-eight tables, striving to determine from the data presented whether pregnancy enhances the predisposition to cancer. His final conclusions are that it probably does increase the predisposition to malignant disease in the uterus, breast and stomach, as well as in other organs.

Books Received

Acknowledgments of books received, being ephemeral matter not necessary to be included in the bound volumes, appear on the second, fourth or sixth advertising page following.

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